

The National Locksmith®

TheNationalLocksmith.com

November 2000
Volume 71
No. 11
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CODES!
BMW, BH010009-BH241009
page 134

**Piecing Together
The Puzzle...**

**...Integrating
High Security**

Don't miss
DIRECT MAIL
BONUS CARDS
see center spread

On The Cover...



Total system integration is a challenge we all face. Manufacturers like Medeco, Mul-T-Lock, Primus, Sargent, ASSA and Abloy are expanding their product offerings, making it easier than ever.

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COMMENTARY



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The Nightmare Continues!

There are times when I have struggled with topics to write about for this Commentary. However, the crater in our parking lot, last month dubbed "Greg's Hole," has provided more grist for the mill than the mill ever needed.

Here, then, is this month's ironic twist to the story.

Months ago, the hole was dug alongside our building by the telephone company in order to permit us to bury the phone line coming inside. All we had to do was drill a one inch hole through the foundation. Greg kindly volunteered to do the drilling.

Between a bit of procrastination, and difficulty in sourcing a long bit, the crater remained outside for longer than anticipated. A few days ago, we broke out the digital camera and decorated the hole for Christmas, for use in this column during December.



BEFORE. Shown in this view is the hole waiting for Greg to drill a one inch



AFTER: Here you see the hole prematurely filled in with asphalt. The pilot hole had been drilled, but the one inch opening had not yet been done. The hole will have to be dug out, a drill hole made, then the hole will be filled yet again.

In the meantime, Greg located a bit long enough to drill a half inch pilot hole through the foundation. (He drilled that hole without telling me, no doubt in a successful bid to avoid being photographed as he did so.) Now all we were waiting on was the arrival of the long one inch bit so Greg could enlarge the pilot hole.

A few moments ago we heard machinery operating outside the building. We hadn't ordered any work. I ran outside to look, thinking that Greg was being crafty again and was drilling the big hole without letting me prepare photographs.

What I found, however, was a work crew tamping down fresh asphalt over Greg's Hole. This was being done even though the one inch hole for the phone line had not yet been drilled. In fact, the work crew asphalted right around the phone line, leaving it stuck out of the ground completely!

Stop!, I told the crew. The foreman not only argued with me that he had a work order to fill in the hole, but he wouldn't even give me his name. Then he stalked off, after removing his work crew.

This is too ironic. Greg's Hole is now filled in with asphalt. I have called my contact at the phone company who promises to send a new work crew to dig out Greg's Hole, so we can drill the one inch opening. Then they will have to come back yet again, and fill in Greg's Hole.

For your enjoyment are before and after photos of the hole. Next month we will give you the exciting conclusion of this saga, and show you the Christmas pictures. After all, we're all one big happy family around here.

PS: Moments after I turned in this story, the work crew came back. They were a little friendlier this time, and more than a little embarrassed. Seems like they filled in the wrong hole. They dug it out.



AFTER THE AFTER: The hole has been re-dug! Tomorrow, Greg promises to drill the one inch opening. Then we can end this nightmare!

Have questions? Want free technical help?
Free Locksmith Forums!

www.TheNationalLocksmith.com

Marc Goldberg
Publisher



November 2000 • 5

Mango's Message

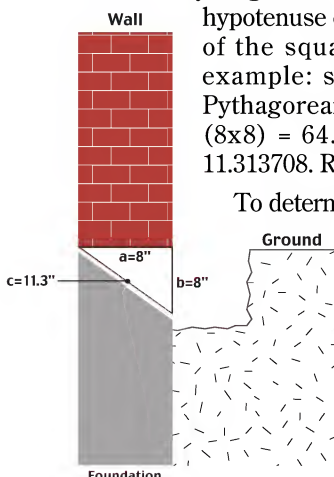
As you have all learned, "Greg's Hole" is becoming an Achilles heel... for me! And I think for Marc as well. I knew when I volunteered for the job of drilling the hole through the foundation into the building to run a new telephone line, that I would live to regret it. I have! So what have I learned from this most unpleasant, and might I add, humiliating experience? A little wisdom that I will share with you in the hopes that it may save you from certain grief. Never, under any circumstances, out of the goodness of your heart, ever volunteer your services for free. NEVER! You will ultimately regret it. Take it from someone who knows.

Let the Games Begin

As with any job, to do it properly and professionally, a good technician needs knowledge, tools, experience and preparation. With that said, it should be quite obvious that I do not possess any of the four required skills necessary to accomplish this task. In fact, the way I see it, Marc's about the only one around here who does! Do you think I can sell him on the idea by expounding on his superior intellect, worldly experience and his preparatory prowess? I don't think so either. Where's a "Mikey" when you need one? He'll do anything! Or was that "He'll eat anything?"

Knowledge

The required hole needs to be 1" in diameter and about 8" below ground level. My starting point is inside the building 8" behind the outside surface of the wall. First I would need to know just how long of a drill bit I would need to complete the task. For this calculation I used the Pythagorean Theorem. Pythagorean was a great Mathematician who was the first to create the music scale of today. He was also a creator of theorems. One of his most famous theorems is: $a^2 + b^2 = c^2$. Pythagorean surmised that the square of the hypotenuse of a right triangle is equal to the sum of the squares of the other two sides. For example: side $a = 8$ " and side $b = 8$ ". Using Pythagorean's Theorem, $a^2 (8 \times 8) = 64$ and $b^2 (8 \times 8) = 64$. $a^2 + b^2 (64 + 64) = 128$. $c^2 (\sqrt{128}) = 11.313708$. Rounded off it's just over 11-1/4".



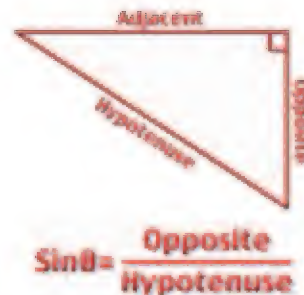
To determine the drilling angle necessary to hit my targeted spot, I employed some basic trigonometry. Since we know the lengths of all three sides of the triangle (8"x8"x11.31"), we can use the following formula. Take the *Opposite*, "a" side of the triangle, which is 8" and divide it by the *Hypotenuse*, "c" side of the triangle, which is 11.313708". This

Home, Home in the Hole

equals 0.707106812373096. Then using your handy scientific or engineering calculator, push the ArcSin button (aSin) to reveal the sum total of: 45.0000025269983. Don't ask me the computation for ArcSin, I just know what button to push. Rounded off it would be about 45. The angle needed to drill the hole is 45°.

Tools

So far I know I need a 1" carbide drill bit that is a minimum of 12" -14" long, one or two carbide pilot drill bits; a hammer drill; goggles and gloves. That's a fairly small arsenal of tools that I should be able to muster up.



Experience

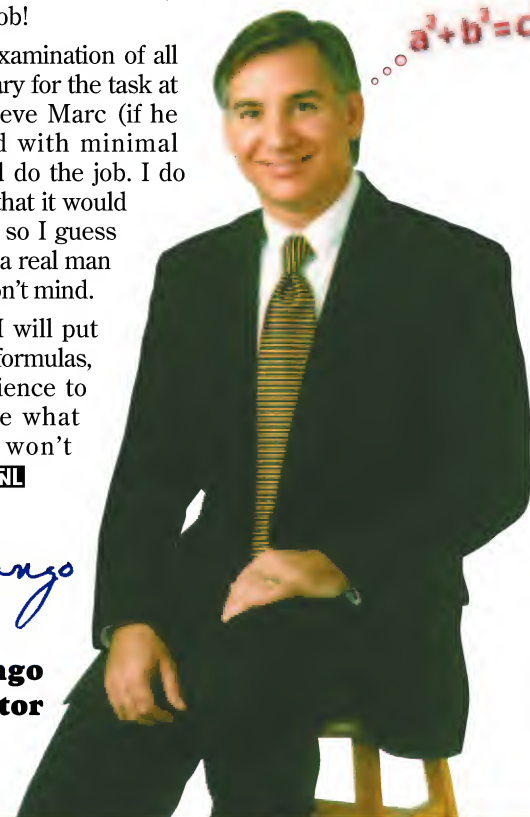
Well, I once drilled a safe! I've installed door hardware and have even done some carpentry work. When I was a kid, as a Boy Scout project (yes, believe it or not I was a Boy Scout) I built a go-cart. By looking at my experience credentials, the only conclusion one could possibly achieve is that I'm over qualified for the job!

After closer examination of all the skills necessary for the task at hand, I still believe Marc (if he really tried and with minimal assistance) could do the job. I do know, however, that it would be rather taxing, so I guess it's going to take a real man to do the job. I don't mind.

Next month I will put these theorems, formulas, tools and experience to the test and see what happens. You won't want to miss it. **TNL**

Greg Mango

**Greg Mango
Editor**



Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

Read Contracts Carefully

I read with great interest a September, 2000 letter to the editor by Rick Madden from Washington in *The National Locksmith*. His primary concern was getting timely payment after doing sub contract work for national security network companies. Two particular companies were mentioned in his comments.

Unable to speak on behalf of one of the mentioned companies, Mr. Madden did warn us of a "company to be weary of is Nation-Wide Security based in Downey, California" with the implication that he was not getting a timely payment from them.

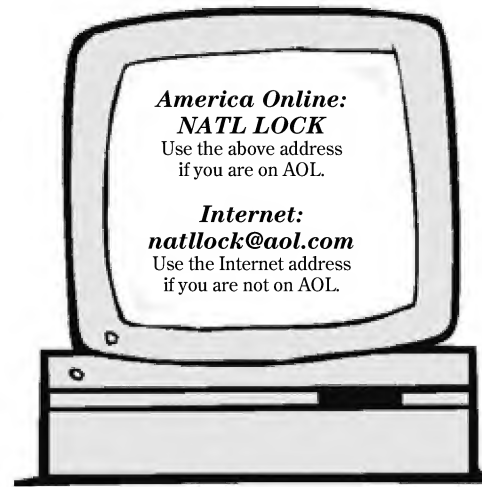
I believe he was referring to Nationwide Security and Building Services (NSBS) which is not an office in the eleventh floor of some major city office building, staffed by eight minimum wage operators. NSBS is an established lock and safe company in several locations in California. When NSBS dispatches a job it is refreshing to have an intelligent person on the phone clearly identifying the problem and has a rough idea what

it should cost to complete the task. They also give us the ability to contact them should any unusual circumstances exist that would prohibit us from meeting their original price cap. They, too, are locksmiths and safe technicians. They understand what we go through and our human limitations.

I caution Mr. Madden, as well as any locksmith, to review his agreements before making accusatory comment that may have a wrongful impact on a legitimate company. Regardless of the thirty (30) day terms with which Mr. Madden invoiced, Nationwide Security and Building Services Company has a written agreement which is sent to any vendor that clearly states a forty five (45) day payment cycle. Mr. Madden's forty day complaint was a bit premature and misleading. He additionally does not make any mention of his communication with NSBS with regard to any attempts of resolution. We often find that a minor lack of communication can lead to major hard feelings and unjustified libelous rumor.

There are, however, a few creative ways to capitalize on national companies. Always remember that one is permitted to say "no" if one can't or does not wish to meet their expectations.

Whenever we receive a call from a national company with whom we have not done business in the past, we assess the task. We evaluate if we are willing to risk the loss should non-payment occur. We make it clear to our potential newly found customer our ability to share our experience with an extensive network in our area through our local locksmith association. We then invoice at our regular rate until we establish a rapport or credit line with the company. We utilize our network. We



ask friends in our locksmith circles if they have had any experience with the company in question. I trust Mr. Madden attends his local association and has developed a circle of professional friends. We do not try to re-train these national companies if their method of operation is different than ours. They already know who they are and what ethic they practice. We have learned over the years that a company will rise or fall based upon its own reputation.

Although I appreciate Mr. Madden's letter of frustration and warning, I would hope we as locksmiths do not make general assumptions based upon a few half facts. I encourage all locksmiths to explore these national dispatch opportunities unless their plates are already full. Consider that the jobs typically requested through these national dispatchers are corporately controlled. The local locksmith would rarely get the call from the local store as many corporate policy manuals include the protocol for rendering locksmith services.

John Hubel, CML
Utica, Michigan



The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Dynalock Re-releases Popular Lock



CIRCLE NUMBER
280

The Classic 2268 low profile series maglock (2-3/16" x 2") is back and available from Dynalock Corp. The 2268 Series projects only two inches into the door opening providing the greatest clearance of any full size maglock for door heights of seven feet or less. It's ideal for retrofitting existing installations. The 2268 maglock exerts 1200 Lbs. holding force, is field selectable 12 or 24 VDC, and includes built-in surge protection. Popular options include rectifier for AC input, time delay, architectural finishes, door position and lock status sensors.

Illinois Lock Company Switch Locks

CIRCLE NUMBER
281

Illinois Lock Company offers the world's largest selection of switch locks for standard and OEM applications, including weather resistant, snap on and keyless remote control styles. Available features include, assorted levels of security, maintaining and momentary indexing, lengths starting at less than 1", milliamps to 20 amps, single and multi-poles, shorting and non-shorting contacts, static protection to 20KVDC, quick connect, soldering and PC terminals, custom wire harnessing and combination cam/switch locks. Illinois Lock Company manufactures a wide variety of key locks and key switches for

virtually any OEM application. Varying levels of security are available for both mechanical and electrical lines. Our large engineering and R & D staff specialize in crating custom locks for specific applications.

Monarch Key Kop



CIRCLE NUMBER
282

In response to many customer requests, Monarch has added a new variation to its line of Key Kop II. The line now includes a four-inch circular stainless steel shackle. Many customers have found this shape more desirable as it eliminates key rings being carried in a pocket and removed from the premises, or for greater ease in handling larger keys, and they are easier to hang from a belt clip. All Key Kops, both the shackled and the cabled versions, now sport a polyurethane boot to protect the lock body, and insulate it from any electric or physical shock. These are available with a choice of black, bright red or vibrant yellow. The color variations also make it possible to easily distinguish one set of keys from another, or colors may be assigned to different divisions or departments.

Videx CyberLock

Vides announced the new CyberLock, the latest in a



CIRCLE NUMBER
283

SecuraKey e*Tag

SecuraKey is proud to announce that e*Tag (a new 13.56MHz proximity system) has been selected as on of "Security Industry's Finest" at the recent ISC-West show. e*Tag uses high frequency 13.56 MHz, a worldwide standard for RFID applications including inventory tracking, express package delivery and credit/debit cards. e*Tag offers the ideal platform for a truly universal ID, access and

financial services card. e*Tag cards meeting ISO standards are available for prices comparable to low frequency molded clamshell cards and offer four color graphics, magnetic stripes and finishes suitable for badge printing. Each e*Tag card has 256 bits of read/write memory. e*Tag readers can read multiple tags in a field at very high speeds. Communications are available in Wiegand, RS-232 or RS-485 multidrop. Dynascan technology delivers maximum reader performance in any environment, even when mounted on metal.



fast growing family of access control products. CyberLock is an intelligent lock cylinder designed to convert existing mechanical locks into full-functioning access control systems. CyberLock permits access for authorized users on pre-selected days at specific times, and provides a comprehensive audit report of all entries. The CyberLock system consists of the virtually pick-proof CyberLock cylinder and CyberKey. The CyberLock cylinder, which contains a microprocessor and memory, has exactly the same dimensions as a standard 6-pin mechanical cylinder. The CyberLock cylinder can be

installed, usually in less than 10 minutes, in tubular knob sets, lever locks, rim locks and mortise locks in doors; as well as locks in cabinets, drawers, storage containers and padlocks. Since the CyberLock cylinder contains no battery, it is ideal for indoor and outdoor application, even in the harshest environments. The access privileges and battery power are located in the CyberKey. Each time a CyberKey opens a CyberLock, a record of the user ID, date and time is stored in both the key and the cylinder, creating a lock history and a key history. A CyberKey will hold up to 1150 events and the CyberLock cylinder will record the last 1100 events. The CyberKey can be programmed to allow users access at specified times and on specific days, while

exceptions such as holidays can be blocked out. In addition, the CyberKey can be set with a date to begin operation, as well as an expiration date.

Alarm Lock Powermag



Alarm Lock's innovative Remote Release Powermag Kit gives you the power of a Mag, with the convenience of pocket size remote controls. The complete turnkey system, Model RR-PM1200 Pak, comes with the advanced 1200Lb Mag, one remote control with infrared remote release, and a plug-in AC transformer. The plug-in 12 VAC transformer eliminates the requirement for pulling wires or employing an

electrician's services. This system can support up to 100 individual remote controls, (Model AL-Remote). These remote controls release the Mag from either side of the door, feature single button operation with positive click response, and are automatically enrolled by system in easy programming mode and each is audibly and visually confirmed. The Powermag can also optionally be powered by, or grouped together and powered by Alarm Lock Regulated Power Supplies (AL-P1A, AL-P3A, or AL-P6A).



Marks USA Survivor Lever Locksets.

Marks USA has enhanced the Survivor cylindrical



locksets, enabling them to operate in a greater range of door conditions. Installation in older, poorly maintained doors or hollow metal doors with insufficient lock reinforcement can now be done without requiring sensitive adjustments. The lockset, which is self-adjusting within 1-5/8" to 1-7/8" door thickness, installs with just two #10 through bolts. Also available are models for doors up to 2-1/4" thickness, and spacer kits for doors of 1-3/8" thickness. The Survivor series is available in both the American and the more rounded Crescent style levers. Both feature the clutch mechanism in ANSI grades one and two, and are available with either conventional or IC core cylinders. These quality-engineered locksets are manufactured in the USA.

Schlage Bulk Cylinder Packs

New Bulk cylinder packs from Schlage Lock meet locksmiths' need for lower



cost cylinder products that require less work and help minimize their inventory. They also are recommended for contract hardware dealers that do their own keying. The new Bulk Pack Cylinder Program provides a cost-effective way to assemble a large variety of different lock cylinders from a small, flexible inventory of partially assembled units. Cylinders are ordered in 10-packs by keyway and finish. The cylinder shells contain top pins and springs, which are held in place with a disposable follower. Plugs are included but not assembled with the shells. Rim cylinders and



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#ASA - 2000

interchangeable cores include all other necessary parts. For key-in-knob/lever and mortise cylinders, the cams and tailpieces are ordered as separate 10-packs to mix and match with the cylinder packs at time of assembly or resale. The program can be used to best advantage if locksets are ordered less cylinder. Stocking cams and tailpieces in separate 10-packs allows maximum flexibility to build a large number of different cylinder configurations from a small number of SKUs. The new program improves responsiveness in serving a broader range of customer needs and reduces labor time for pinning, because it is not necessary to take the cylinder apart first. Overall cost per cylinder is also lower.

SDC HiTower Mortise Lockset

The new SDC 7800 Series HiTower Electric Lock features positive fail-safe



operation combining security with life safety and is approved for fire doors. SDC HiTower locks provide uninhibited egress from inside while the door remains locked on the outside or stair side. Access is accomplished by a mechanical key or access control. The door will release immediately when signaled by the Fire/Life Safety system, but will stay latched even when unlocked, maintaining fire door integrity. HiTower applications include installations where electromagnetic locks and strikes are unacceptable including; stairwell doors, elevator lobby door, perimeter and office doors.

Fail-secure electric mode is available for applications such as inner office access control, mantraps, money counting rooms and more. Fail-safe and fail-secure is available locked on both sides for interior security applications. HiTower locksets are ADA compliant.

ASSA Twin Exclusive

A new Twin Exclusive profile, incorporating the Twin 6000 features and up-grading the Twin 6000 51 profile, is available from ASSA. The new profile utilizes the existing 51 profile keys and sidebar and was developed for existing Twin 51 contract holders, enabling them to extend the life



of their patented key system for another 14 years. All of the product supports the new Twin Exclusive 851 profile as

well as the old Twin 51 product.

Federal Lock Rekeyable Padlocks

Federal Lock now offers a full line of solid, rekeyable brass padlocks in addition to their



solid steel padlocks. These locks are available with quick-change hardened steel, stainless or molybdenum shackles in three popular lengths. These rekeyable padlocks come with KD, KA or O bitted 6-pin cylinders. Key retaining, master keying and restricted keyways are available with these solid brass padlocks. **TL**

Safe Opening Volumes 1-5



These are the classic safe books you will need to open most any safe easily and professionally.

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- Volume 2 - Modern Safes
- Volume 3 - Antique Safes
- Volume 4 - Antique Safes
- Volume 5 - Very Recent Safes

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#SO - 1, SO - 2, SO - 3, SO - 4, SO - 5

COVER
STORY!

medeco[®]
HIGH SECURITY LOCKS

NOBODY

does it
like

MEDECO!

— by Jake Jakubowski —

1. The unmistakable Medeco key.

2. Mortise cylinder cutaway.

3. Key-in-knob cylinder.

*Medeco High Security Locks was born as "Mechanical Development Company. Medeco is an acronym of the first two letters in each word of **ME**chanical **DE**velopment **CO**mpany, a small tool & die shop in Salem, Virginia. In 1968, the owners and employees of the company developed a unique locking principle of angle key cuts and elevating and rotating pin tumblers that provided millions of key combinations and a level of security that was unmatched in its time. The angled cuts on the key were used to rotate unique bottom pins, and a sidebar and hardened steel inserts were used to produce a cylinder that was highly resistant to virtually all forms of attack. Soon after, Medeco was officially formed and immediately set the standard for high security and key control*



4. Deadbolt.

The first time I remember seeing the Medeco name was in a novel whose story took place in New York City. In part of the story line, a young woman's apartment is burglarized (the thieves picked the lock) and the detective who investigates the robbery, tells the victim to "Get a locksmith to install Medeco locks on your doors and this won't happen again, 'cause they're unpickable."

Several years later, In October of 1985, I was sitting in an HPC locksmith class in Schiller Park, Illinois. On the wall in front of me was a large color schematic of a Medeco Bi-Axial mortise cylinder and key. Recalling the novel I had read, I asked the class instructor if Medeco locks were really as tough as the fictional detective had made them out to be. He said: "They're probably the toughest lock made in America."

It would be more than a year after completing that course before I had my first "experience" with a Medeco lock. I was called to rekey a storefront and it turned out that the cylinder was a Medeco. Fortunately for me, at the time, it was not a Bi-Axial, but an old Commercial keyway and I had just bought the inventory and equipment of a retiring locksmith. Included in that purchase was a stock of Medeco Commercial key blanks, a Medeco pinning kit and an HPC 1200CM. It took me more than an hour to originate keys and rekey that first Medeco cylinder, but I got the job done, and got an inordinate - or so it seemed at the time - amount of money for the job. That experience instilled in me an appreciation for the quality of Medeco products.

Unfortunately, at that time, a Medeco dealership through a supplier was an expensive proposition and a Dealer Based Keyway (DBK) program



5. Various restricted key systems.

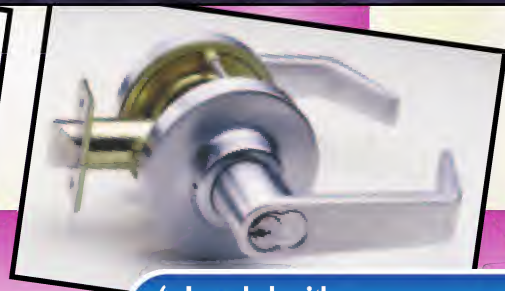
was far beyond my reach. It was several more years before I recognized that Medeco was more than just a High Security Lock company and could be a viable profit center for a savvy locksmith. However, the initial costs, which were still sizable, kept a lot of locksmiths from becoming Medeco dealers.

During the mid-1990's, Medeco concentrated on developing tools to help the locksmith market flourish. With incentive programs, business training classes, mechanical training, specialized marketing tools and an aggressive sales force, Medeco paved the way for locksmiths to develop their own highly profitable Medeco businesses.

By late 1996, Medeco changed their distribution strategy by selling directly to retail locksmiths instead of selling through conventional wholesale distribution channels. That change was responsible for opening a whole new area of opportunity for the locksmith, who up to that time was reluctant to invest in a Dealer Based Keyway.

Today, any locksmith can buy, sell and service Medeco products either directly from Medeco or from a select group of regional distribution partners. Some of Medeco's more exclusive Keyways are not cheap, but others have a very reasonable commitment and buy-in, and there are "open" keyways and systems like GLD available to the locksmith who wants to offer Medeco to their customers. Medeco has a number of economical dealer programs that can be utilized by even the part-time locksmith who wants to provide their customers with a great product.

The Medeco line which includes: cam locks, mortise cylinders, rim and



6. Lever lock with an interchangeable core cylinder.



7. Mortise and rim cylinders.



8. Interchangeable core mortise cylinder.



9. Padlocks.



10. Switch lock.



11. Profile cylinder.



12. OEM vending and machine locks.



13. Cam lock.



14. Cam lock w/screw extension.

I/C cylinders, key-in-knob cylinders, switch locks, padlocks, leversets, auxiliary locks, Keymark cylinders and more - offers you and your customers, more options, more retrofit capabilities and, consequently, more security solutions than any other lock line in America.

Mechanically, Medeco is renowned for its key control programs and the fact that they have the broadest inventory of retrofit cylinders in America. That's an undisputed fact. One of Medeco's newest retrofit cylinders is for Schlage Interchangeable Core. Medeco offers retrofits for Arrow, Schlage, Amerock, Corbin (5460A, 5160E, Old style, New style, CK4200, 5460B, C, G, M, Ensign 5700 Series, 800 Series leversets, 6600 Series, CL3400 and CL 3600) Falcon, LSDA, MARKS, OLYMPUS, OMNI, PDQ, RUSSWIN, SARGENT (including "Integra" and the old 8-line), Yale and others.

As with Corbin retrofits, Medeco provides in-depth retrofits for the multiple lock series that many manufacturers offer. To top it off, Medeco is constantly researching and listening to feedback from locksmiths to plan new retrofit products to fit specific needs in the marketplace.

I know from experience that when you can offer a customer a proposal to upgrade a hundred Sargent locksets - 6-line, 8-Line and 480 deadbolts - to KeyMark cylinders, they listen when you tell them they don't have to buy new hardware, just new cylinders and keys. The ability to retrofit existing hardware with the benefits of a restricted key system, and patented key control, is a powerful selling point. The savings for the customer

are substantial. Especially when the retrofit can cost less than half the price of new hardware.

Not only can Medeco supply you the mechanical hardware you need to retrofit the majority of locks in the marketplace today, they also help you sell the hardware with a variety of business related programs designed to help the retail locksmith get the most bang for their bucks.

With programs like QuickProposals®, Medeco can help enhance your chances of getting a bid by designing a full-color, graphic based proposals for you to present to your customers. QuickProposals® are customized with your shop name, the customers name, references and master key and hardware information that you furnish Medeco's Locksmith Communications Group on a simple-to-use Assessment Survey and Required Work Sheet. Fax the information to Medeco, and they will deliver the completed QuickProposals® to you in about two days via UPS. These proposals give your customer a favorable image of you as a serious, security professional, without you having to spend hours crafting your own proposal on a computer, typewriter or using a calculator.

QuickProposals® is another unique Medeco business development programs that are available to the locksmith.

There is no question about it; Medeco has been a serious producer of high security mechanical hardware for decades. Hardware users from institutions, to the military, to shops, malls and spas, to

15. Machine and game vending locks.

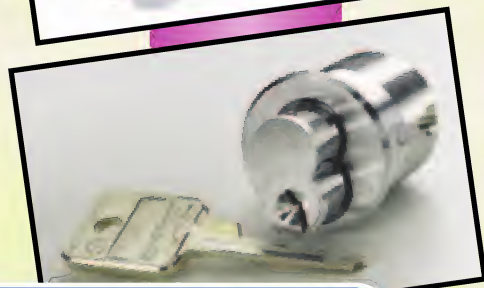




16. Desk locks.



17. Popout lock.



18. KeyMark I/C key and cylinder.



19. Business development training programs.



20. Request to exit switch.

industrial users, to residential customers and vending machine operators have all benefited from Medeco's long and expanding list of mechanical security products.

Locksmiths, architectural specifiers and security specialists have long recommended Medeco.

Today, it's easier than ever for locksmiths to participate in the many programs that Medeco has to offer. Programs designed to help the locksmith shake the shekel tree. Programs that allow you to sell hardware upgrades; without costing your prospective customer a wheelbarrow full of cash. Programs that allow you to sell Embassy locksets, Maxum™ deadbolts, Medeco cam locks, Medeco and KeyMark™ interchangeable core cylinders, Medeco Padlocks and a host of other Medeco products to customers that need more than just an upgrade.

Then consider Medeco's EAC (Electronic Access Control) products. Again, products that can stand alone on a single door or products that can integrate with existing hardware and systems. Medeco EAC platforms offer the ability to develop hybrid mechanical/electronic security profiles without losing the investment in the mechanical hardware. Systems with indestructible credentials (called SiteKeys) that are capable of meeting the requirements of the most demanding mechanical, master key installations while offering the customer multiple electronic access schedules. Medeco calls this new EAC platform SiteLine.

Regardless of what Medeco product you are offering your customers, SiteLine, with its unique, upgradable SiteKey will work! Further, SiteKeys are available in any Medeco keyway: Patriot, DBK, ISC, KeyMark, GLD, AIR, Sky, End User and even original. All have the ability of becoming a SiteLine credential rather than simply a mechanical key.

Let's suppose that you had sold a customer a Medeco key control program and installed new hardware or upgraded the old hardware to accommodate the new system. Now, a few years later, the customer determines the need to increase security by putting the exterior doors on some kind of electronic access. You can do it without disturbing the integrity of the existing master key system. Simply upgrade to one of

Medeco's EAC programs where mechanical and electronic components can be integrated into a new and more powerful security management tool with the addition of some Medeco EAC hardware and peripherals. It's that easy!

SiteLine, by Medeco, has three different door controllers available. First is RetroSite. RetroSite is an amazing little reader that allows you to use a SiteKey with any installed controller that uses a 26-bit Weigand reader. That represents as much as 70% of the currently installed electronic access products used in the industry.

The second option is the SiteLine Single Door Controller, which is a stand-alone access controller that does not require any high-voltage wiring. The Single Door Controller provides control to one door with up to 1200 users per door. It also provides an 800 event audit trail for complete access accountability. It is a simple-to-install EAC device and can be used with MagLocks, electric strikes or electrified locksets.

One of the more exciting features of the Single Door Controller is its ability to interface with other systems. In addition to its functional door control aspects, the Single Door Controller outputs can be used to shunt fire and burglar alarm systems upon authorized access, activate CCTV cameras and control handicap devices.

The third and latest addition to the SiteLine family is the Intelligent Lockset. This is a battery powered, stand-alone device that simply mounts - clamshell-style - to the door with all of the electronics and reader built right in. There is no external wiring required. Just like the Single Door Controller, the Intelligent Lockset can authorize as many as 1200 users and keeps track of the last 800 events.

Medeco's EAC devices are all designed to compliment existing and interface with existing mechanical systems and integrated into a single system that captures the best of mechanical and electronic access control, driven by Medeco's powerful SiteLine software.

Rounding out Medeco's SiteLine family of products is comprised of a full line of electric strikes, Mag-Locks and power supplies. Medeco strikes range from low profile strikes that mount in jambs where other strikes simply won't fit, to heavy-duty strikes that are fire

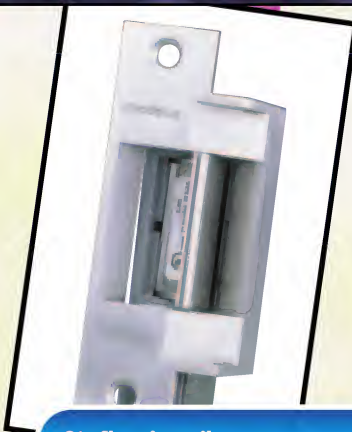
and UL rated, with a lifetime warranty. MagLocks are offered in both 600 and 1200 pounds of holding force for a wide variety of applications. The versatile Unlatch provides the function of an electric strike and yet works in conjunction with the normal functions of a standard key-in-knob or leverset (a mortise lock model will soon be available). It is so simple to install that the installation does not require any modification to the doorjamb.

Like Medeco's mechanical line, their EAC line is growing too. The combination of the two now offers you, the locksmith, an unmatched versatility to provide your customers the most flexible, secure and convenient systems available. It all started with an idea for a key that had angled cuts on it and progressed to a utility patented, high security key that can be turned into an electronic credential that opens potential markets never before available to you.

We all recognize that change is a fact of life. We also are aware that all change is not necessarily good. But one thing is certain, our industry, the way it does business, the products that are being introduced and the requirements of our customers dictate that we adapt to those changes and make the new a part of our professional repertoire. Especially when those changes can integrate so well with the existing ideas, products and methods we're all so comfortable with.

Consequently, it makes sense to assimilate those changes with the help of a company like Medeco, who has a proven track record of quality product development, customer support, and marketing programs to help you make the most of the entire Medeco product line. Perhaps as important as any other point I've written about, Medeco is dedicated to the success of the locksmith by not selling through competing channels of distribution. Not many others can claim that!

Call Medeco (1-800-839-3157) and find out how you can benefit from offering Medeco's wide range of mechanical and electronic systems and upgrades. Tell 'em, "Jake told me to call" and I guarantee you'll find out why I say: "Nobody does it like Medeco!" Y'all heah me, now? Circle #267 on the Rapid Reply Card. **TNL**



21. Electric strike.



22. Control panel power supply.



23. Electromagnetic lock.

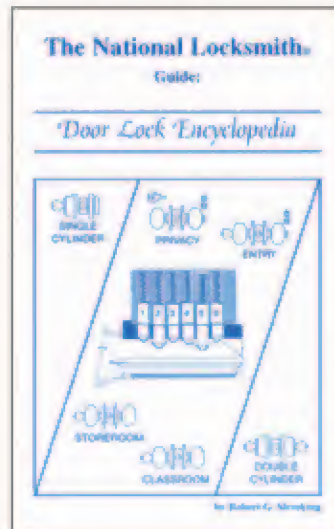


24. SiteLine reader and key with mechanical integration capabilities.



25. SiteLine deadbolt and KeyMark equipped lever lock.

Door Lock Encyclopedia

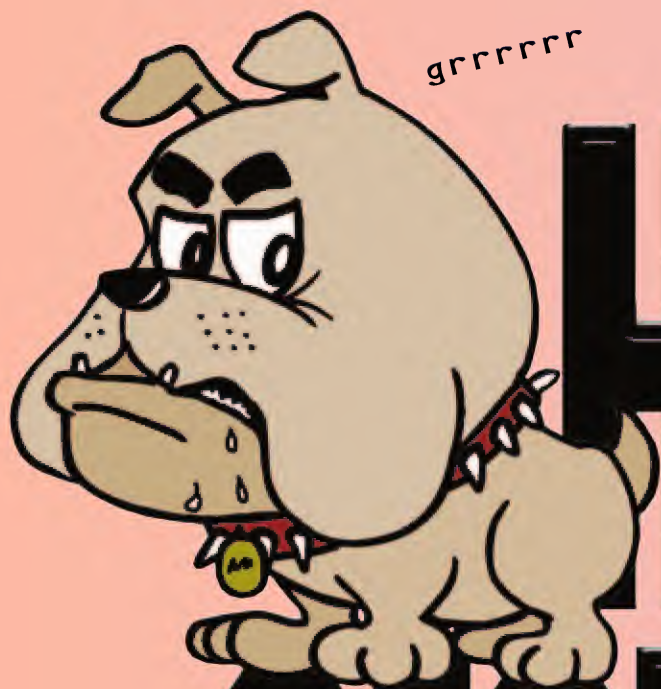


The ability to remove a lock from a door, disassemble the mechanism, and remove the lock cylinder for service is not always a simple straight-forward task.

CLICK HERE TO LEARN MORE

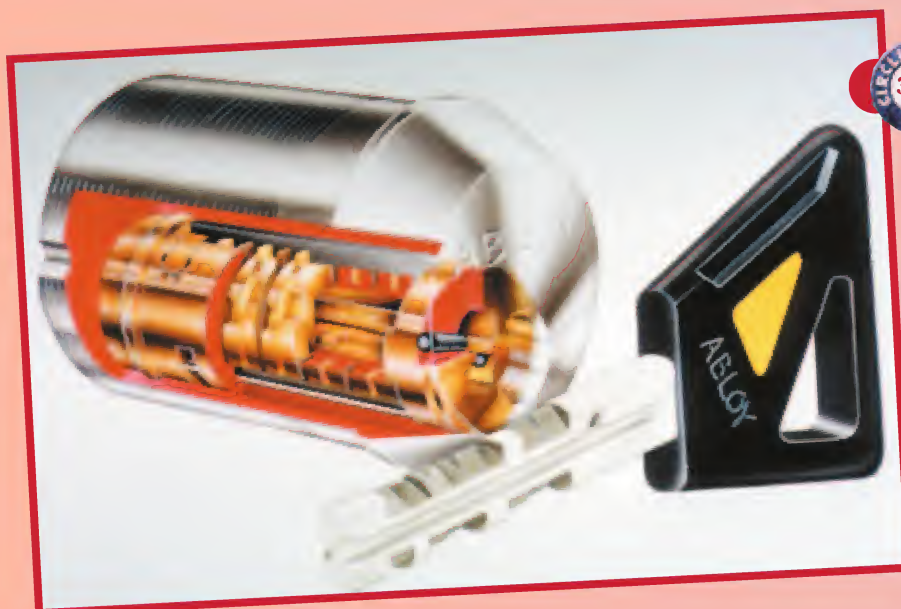


#DLE



HIGH SECURITY

locks & cylinders



Abloy Disklock PRO

The patented Abloy Disklock PRO rotating disc cylinder with up to two billion keyways includes a disc controller and has no springs or pins to wear, jam, or weaken. The cylinder, which is UL437 listed and is the most complex GGMK system available today, is virtually pickproof, the manufacturer claims. One key can open all products, including a complete line of maximum security tubular deadbolts, hardened steel mortise and rim cylinders, key in knob/lever retrofit cylinders, padlocks, cam locks, cabinet locks, switch locks and more.

ASSA Announces New "Twin Exclusive" Lock

CIRCLE NUMBER
302

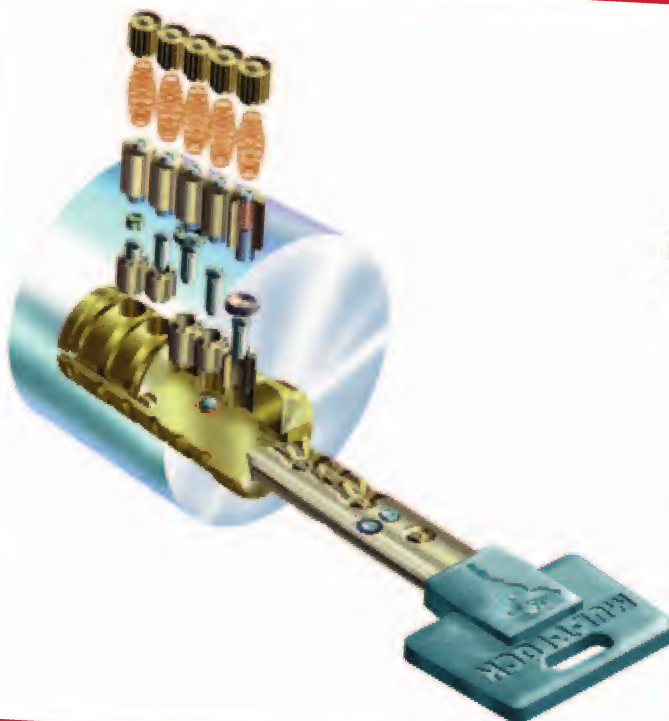
ASSA has added the new, patent-protected Twin Exclusive to its family of locks. An improved upgrade to the Twin 6000 model, the Twin Exclusive offers the same benefits plus V-10 sidebars and pins that can be used with existing pin kits. Just cut a new set of keys, and the Twin Exclusive locks are compatible with any Twin 6000 system. As with all ASSA products, the Twin Exclusive is guaranteed for life and builds into each and every product uniquely designed features that masterfully resist attempts of physical attack.



CIRCLE NUMBER
303

Kaba High Security Locks

Kaba has added two new removable cores to their already extensive line of Peaks Patented key control products. Peaks cores that fit Sargent and Schlage removable core housings are now available. They join Peaks cores that fit Medeco, Corbin Russwin and Yale housings. The patented line also includes interchangeable cores, mortise and rim cylinders, and a group of key-in-knob cylinders able to retrofit hundreds of knob, lever and deadlock applications using one key. Kaba has created a Peaks key gage that is the first of its kind in the industry. The new Peaks Multi-Gage #3800-00-4050 checks both spacing and depth. Spacing gages for both .140" and .150" spacing are on either end of the tool. Depth gages for both the A2 and A4 system increments are also included. The tool has stepped increments with a "go / no go" feature rather than the solid incline method used by other manufacturers. The laser cut precision allows accurate checking of cut keys. This is a must have tool for saving time and blanks when cutting Peaks keys.



CIRCLE NUMBER
304

Mul-T-Lock High Security Locks

Mul-T-Lock's entire line of high security locks can be keyed alike, making a Mul-T-Lock installation a fully integrated system. Mul-T-Lock's advanced key and cylinder with telescopic tumbler pins provides a common link between all the company's products. Mul-T-Lock's access control system allows for every lock used at home, in the office, or in institutions and organizations to be integrated into a master key system, with control levels meeting the highest security standards. Locks can be keyed alike, keyed differently or master keyed in accordance with the customer's selective entry requirements. Further, Mul-T-Lock's Interactive line of products sets new standards for patented keys and restricted key cutting systems. The total high security line consists of a wide variety of high security cylinders, a large selection of high security padlocks and more.



CIRCLE NUMBER
305

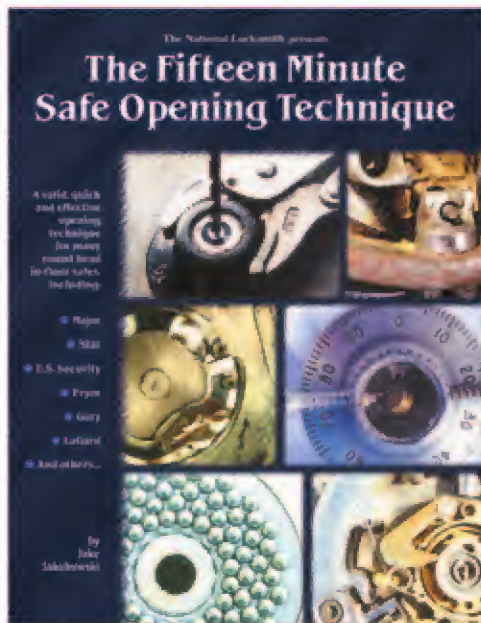
Sargent Classroom Security Mortise Locks

Sargent has four new Classroom Security function mortise locks to address the security issues present in schools today. These new locks incorporate security features including 12 gauge steel case, inside cylinders, which lock and unlock the outside handles, vandal resistant trim options, and electro-mechanical options. Optional deadbolts and guardbolts provide additional security. The new Classroom Security functions are available with Sargent's patented V-10 and Signature cylinders, conventional cylinders, removable and small-format interchangeable cores.

Schlage Primus Commercial Applications

CIRCLE NUMBER
306

Schlage's Primus keyway system provides the ultimate key control for commercial buildings. Primus is a high-security cylinder system featuring patented key control with geographic exclusivity to control access of keys, cylinders with a second set of pins for increased security and pick resistance, and UL 437 versions for customers who need protections against drilling and physical attacks. Primus is precision built to extremely close tolerances and the highest quality standards. Primus features six increasing levels of security, providing different restrictions for key acquisition. Each level requires an appropriate ID card and/or signature verification for key duplication, and all levels utilize Primus cylinders and keys, which are patent-protected against unauthorized duplication. To select the proper level of security, customers should consider overall key control, convenience and service required for the installation. The specially designed Primus key, which operates Classic or Primus keyways, can be duplicated only by an authorized Schlage Primus dealer. Primus is compatible with Schlage's full line of security locks, easily accommodating upgrades to existing Schlage keying systems. The Primus high-security cylinder system is ideal for single or multi-family housing, retail stores, office/commercial space, schools, universities, hospitals, industrial sites or wherever key control and security are a priority. **TNL**



15 Minute Safe Opening

This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGard style round head.

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#JJ - 1

1999 Dodge Caravan

by Alan Morgan



The Minivan was practically invented by Dodge. They first appeared in Dodge showrooms in 1982 and have sold more Minivans than any other car manufacturer. Strattec has been making the locks for the Caravan since its first release.



There are two ways to access the retainer of this lock. First turn the ignition lock to the "ON" position. Tilt the steering wheel all the way up and use a light and look between the shroud and the dash and you will see the active retainer release.

The second way is to remove shroud to access the retainer, but that is more work than is needed and unnecessary.

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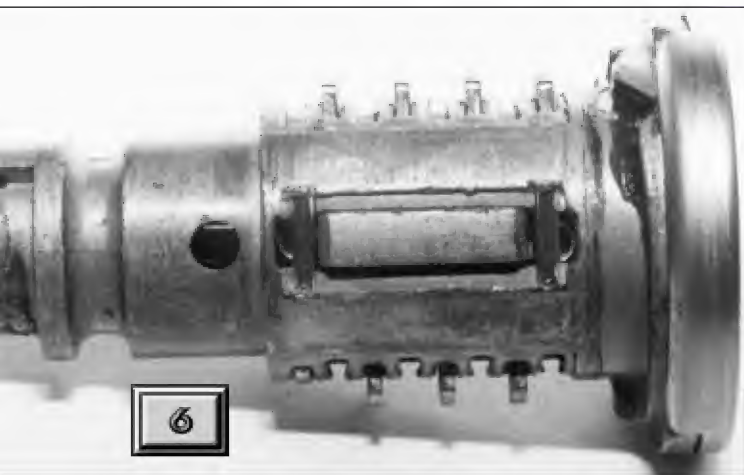
Once you find the release, take an ice pick and push in on the release and pull the lock out.



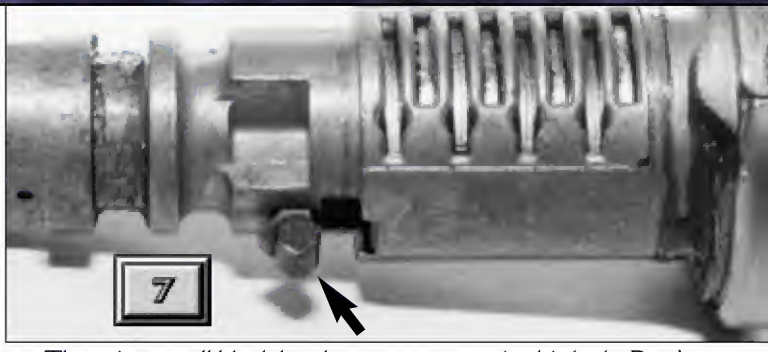
The ignition lock removed from the column.



To disassemble the ignition lock, turn the lock counter-clockwise and there will be a brass pin stopping it from turning any further. Depress the pin and the plug will turn another 1/8 inch. Then you can slide the plug out.



This lock has all eight tumblers and a sidebar.

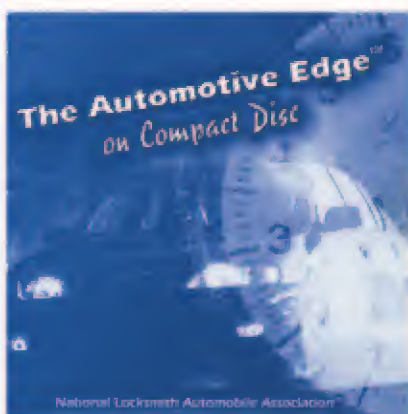


There is a small black key buzzer actuator in this lock. Don't lose it, the lock will not operate without this.



To service the door lock we will have to remove the inside door panel.

AutoEdge



This CD contains over 750 pages of automotive locksmith service.

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#AE - CD

Ask Dave



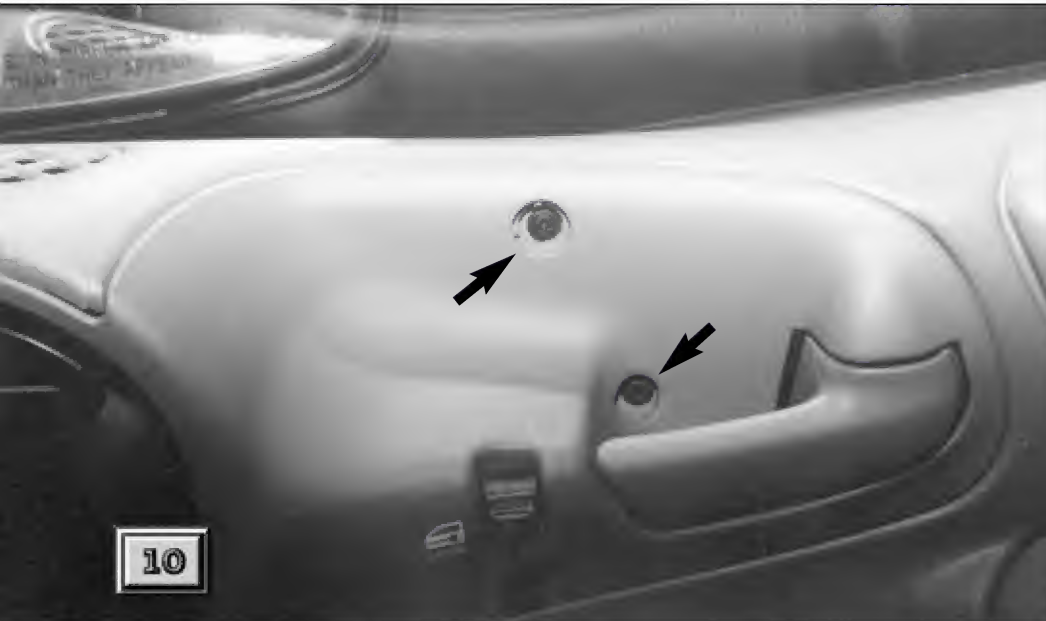
You asked.
He answered.
This is safe
and vault
Q&A with
an attitude.

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#AD - 1



Remove the Phillips screw on the armrest.



Remove the plastic cover hiding the two Phillips screws located above the inside handle and remove.



Unsnap the trim cover that you just removed the screws from. This piece has the power lock switch and power window switch in it. Disconnect the wires from the switches.

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There is a Phillips screw on the very front side of the door panel. This screw doesn't have to be removed.



Release the plastic clips holding door panel on.

Once you release the door panel you will have to disconnect the rod to the inside door handle.

14



With the door panel off peel the plastic dust cover back and you will have easy access to the lock.

The door panel can now be removed.

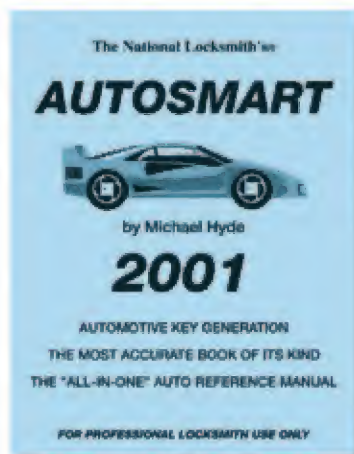
15



16



AutoSmart

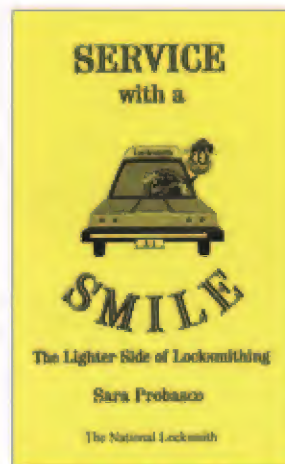


A MUST
for every
locksmith!

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funnybone of
anyone in a
service
oriented
business.

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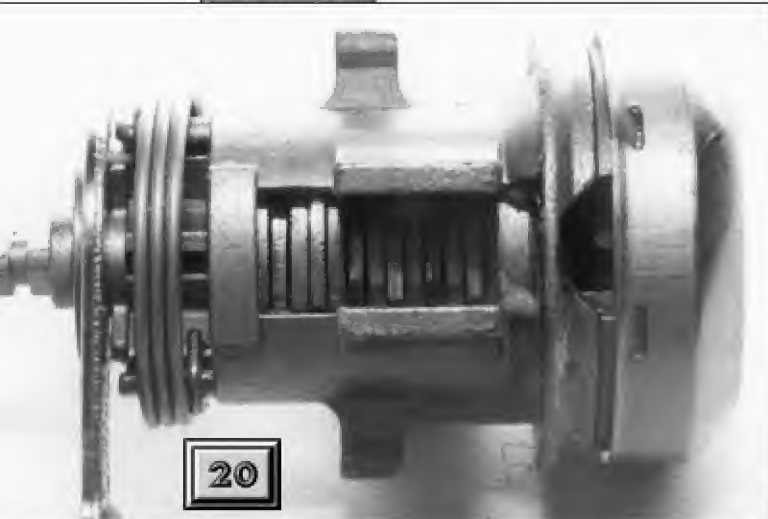
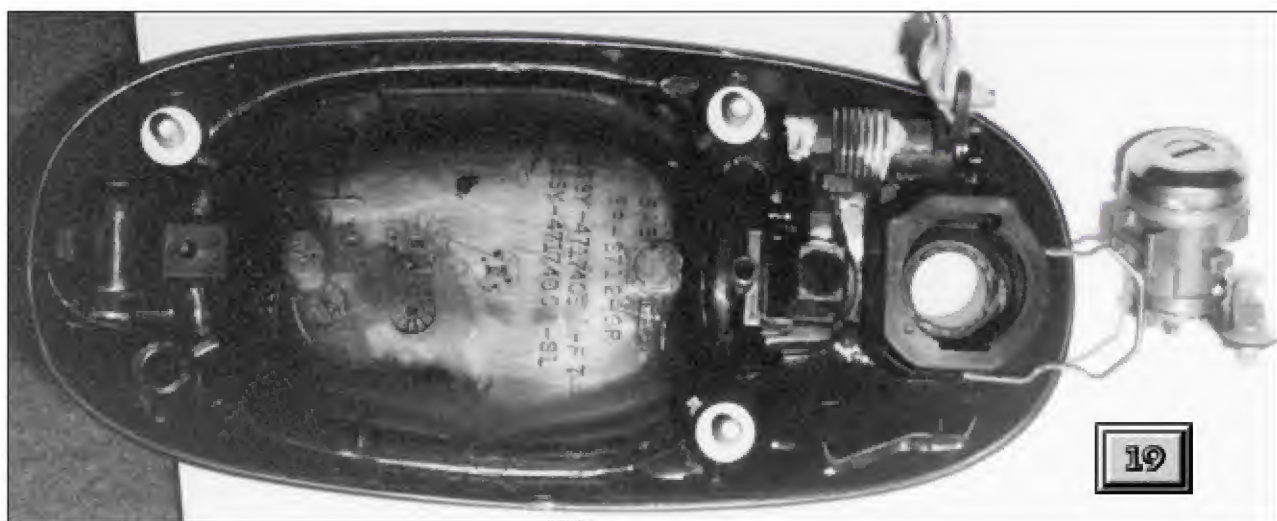


#SWS

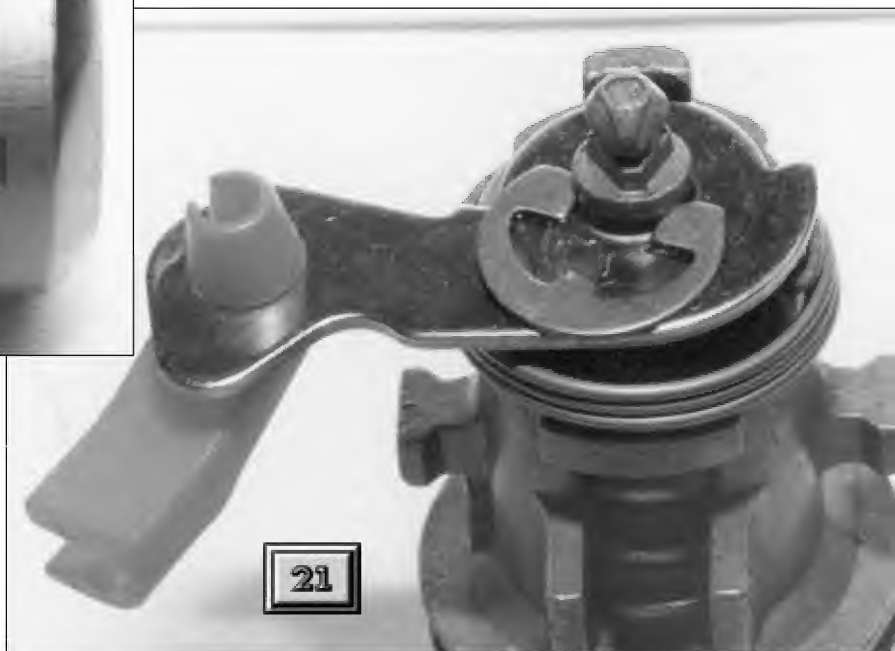


The best way to remove this lock is to first disconnect the out side door handle rod from the latch. Then remove the three 10mm nuts from the door handle.

Disconnect the lock rod on the lock.



The handle should be in your hand. Once you have the handle out you can remove the metal clip from the handle and then the lock will come out from the handle.



You can see most of the tumblers through the large drain hole opening.

The lock cylinder is easily disassembled. Remove the tailpiece and then pop off the face cap. The face cap is reusable.

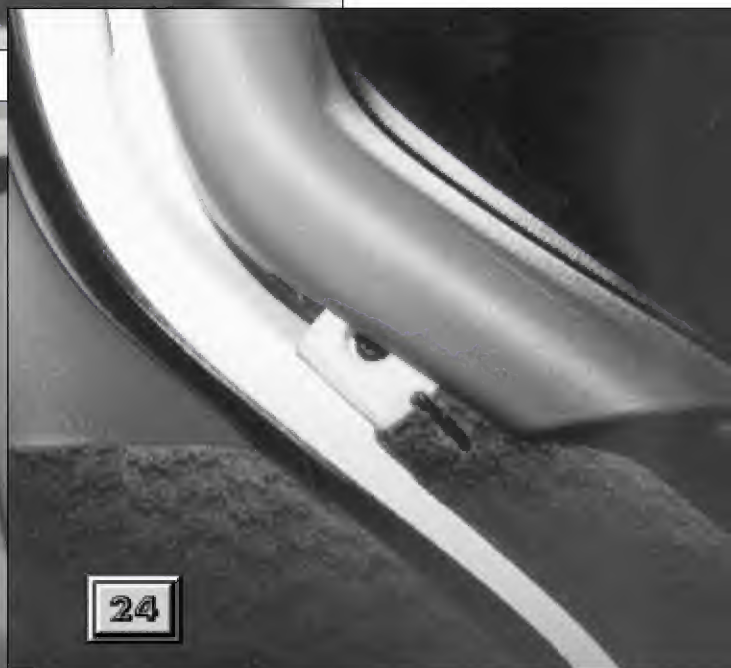


This lock has 7 wafers in positions 2 through 8.



LEFT SLIDING DOOR

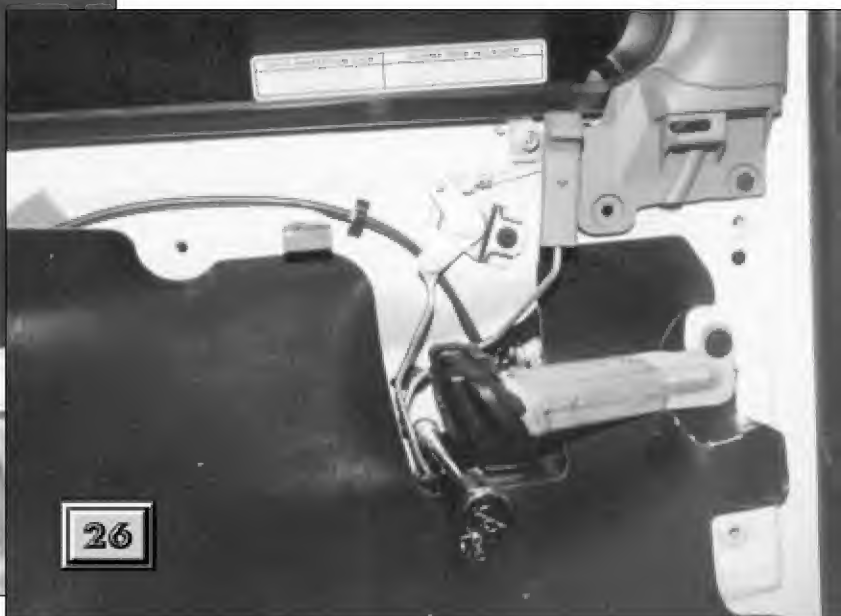
This is a very easy door lock to remove but you must have the door open half way.



First release the upper plastic trim around the window. This will pull straight out. Once you have released the upper plastic trim there is a Phillips screw under it. Remove this screw.



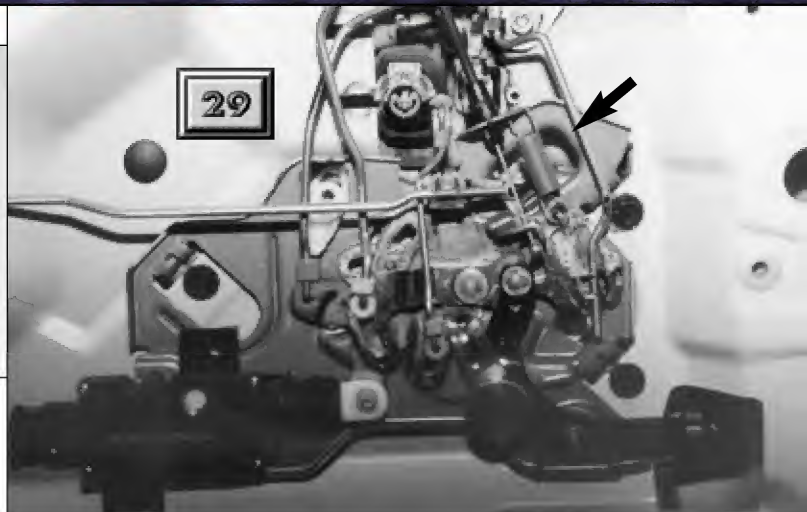
Remove the Phillips screw in the door pull cavity on the upper part of door panel.



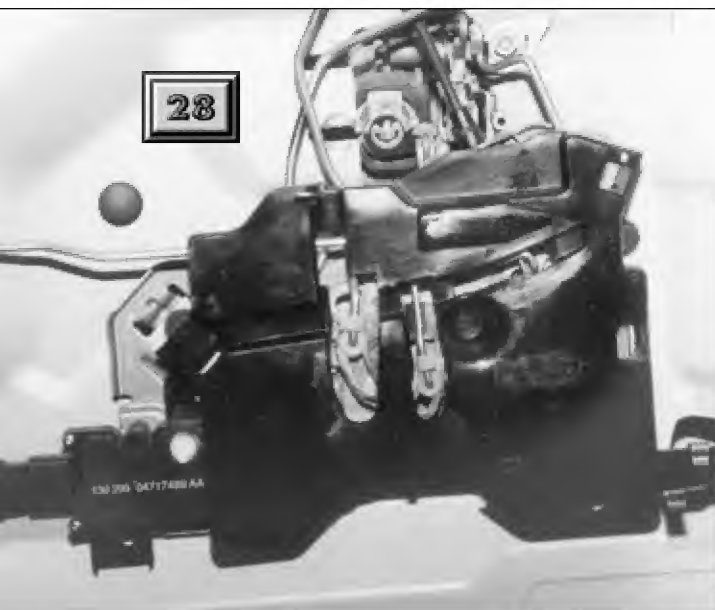
Release the plastic clips holding the panel on and remove the plastic trim around the doorstop. You may have to move the door back in forth to release all the clips.



There is a bracket that has three 10mm bolts securing it. Loosen the two on the left then loosen the other and this bracket will slide off.



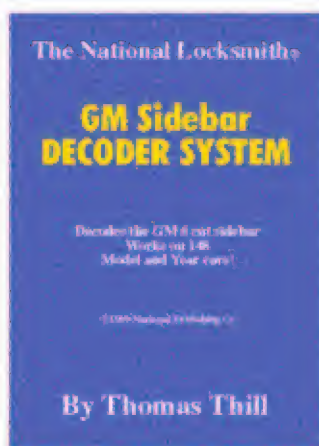
There is a spring on the latch that can easily be knocked off so be careful.



You will now see a black plastic shield. Remove this and make sure you know how it goes back on.



Disconnect the door lock linkage and handle linkage and remove the three 10mm bolts holding the handle on.



GM Sidebar Lock Decoder System

Tom Thill, the author of a new book, has invented an amazing new way to make keys for six cut GM Sidebar Locks.

[CLICK HERE TO LEARN MORE](#)

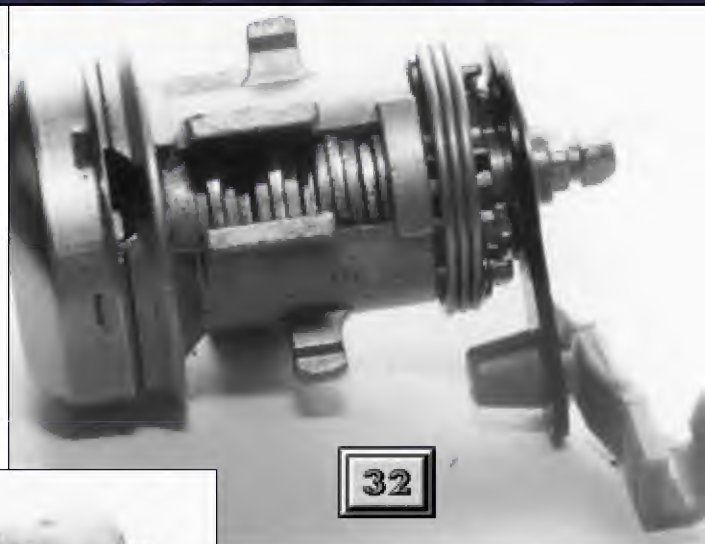


#TT - 1

November 2000 • 33



Once the handle is removed release the metal clip to release the lock.



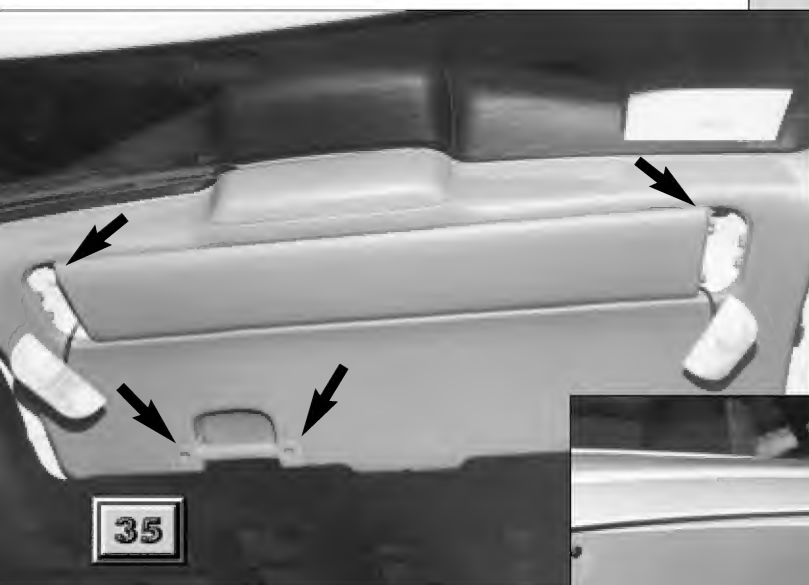
This lock also has a large drain hole.



This lock has 7 wafers in positions 2 through 8. The right side door lock will come out the same way, but has one less screw to remove.



BACK TAILGATE LOCK



The first thing you do is remove the two Philips screws that hold the inside handle on. Next, remove the two interior lights from the door panel. These will pull off easily and just disconnect the wires from the light, or slide them through the panel as you remove it.

Next remove all the screws around the outside door panel.

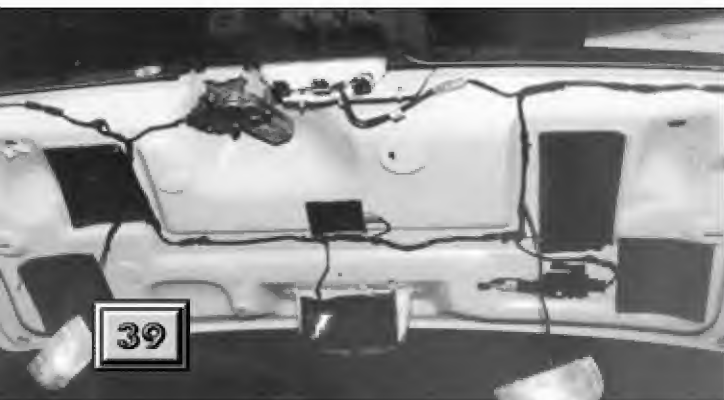




Remove the plastic cover that goes around the center brake light. This is part of the door panel and this will easily pull off. Pull from the front then slide off. Then the back will slide forward because it has hooks on the back.



Next remove the two Phillips screws that are under this cover. Then remove the door panel.



Now the door panel is off. The first thing that you will think is that the door lock was put in the door before they welded the door skin on. Not true, the lock and handle will come out with minimal effort.

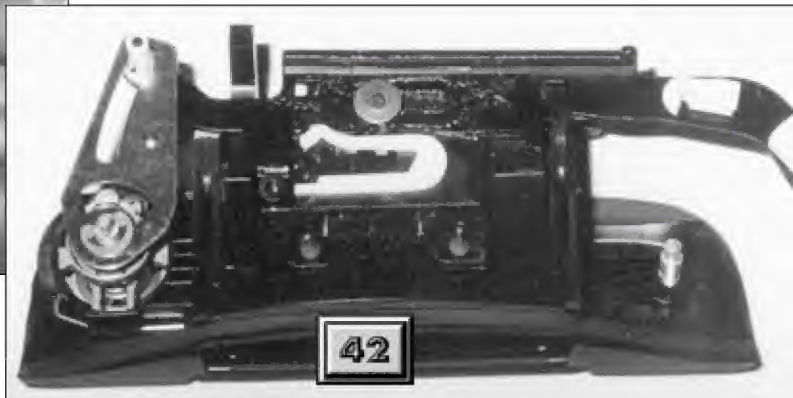


Pull the plastic shielding away from the latch.

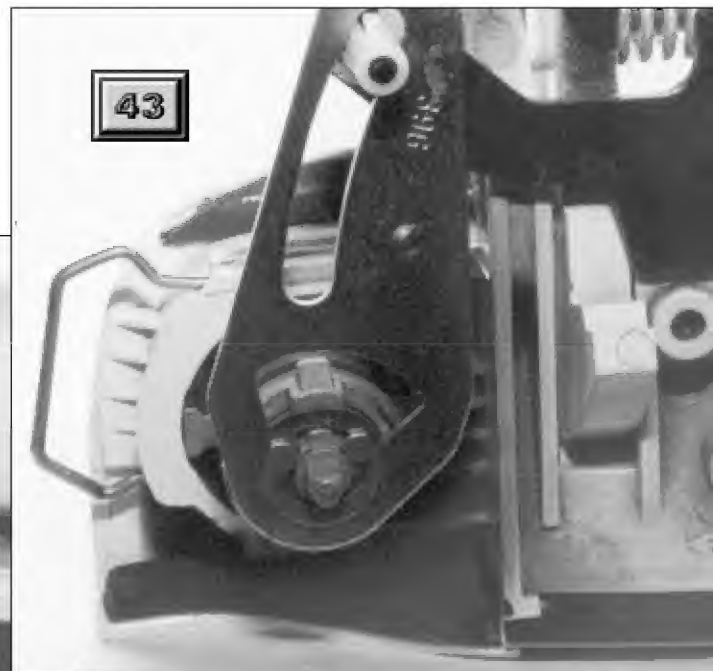
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This will expose the lock linkage.



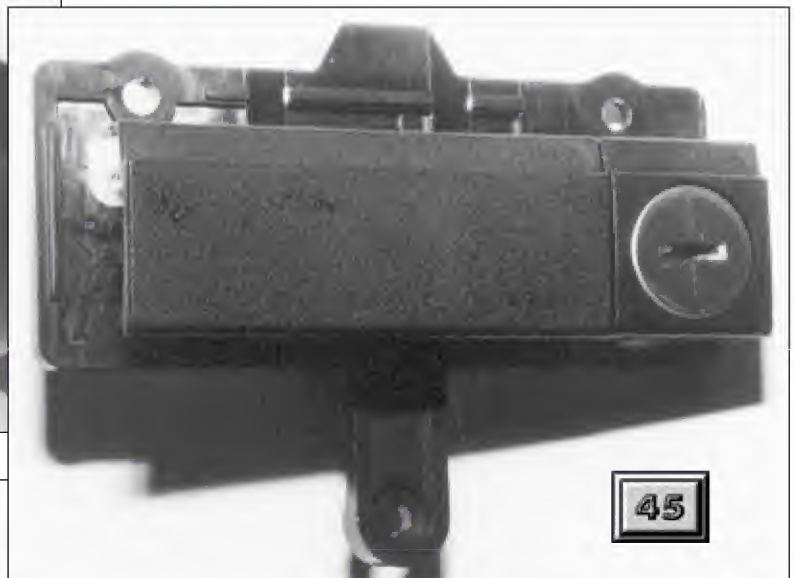
Next remove the plastic nut that holds the handle in. There is only one. Now disconnect the linkage. This has to be done in the hole that you took that plastic nut out. Take a long screwdriver and disconnect the plastic clips holding the rods on. You will have to lock and unlock the door to see both rods. Vans with power locks have two linkage rods. Vans with no power locks have only one linkage rod. When the rods are disconnected the handle will pull off from the left. There is a lip holding the other side in.



Once you have handle out you can release the metal clip to release the lock. This lock has 7 wafers in positions 2 through 8.

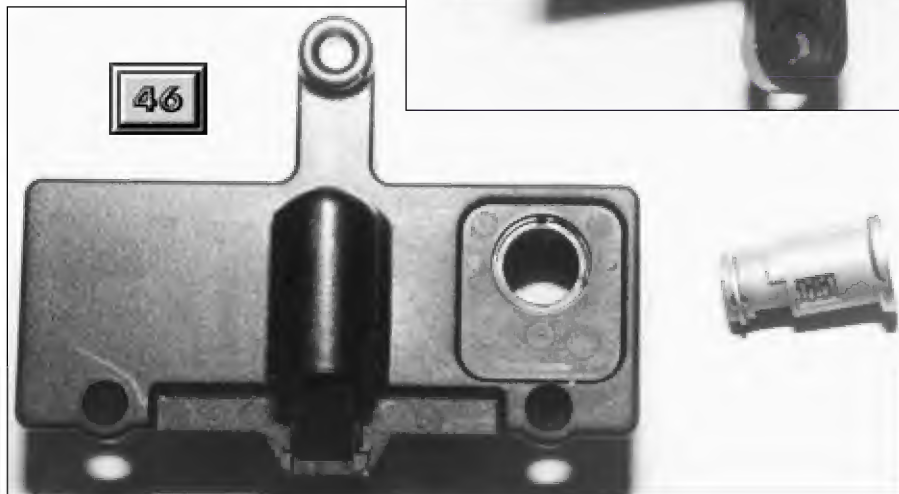


This glove box is under the passenger seat. Here is a backside view.



This lock is easy to remove, just remove the three Phillips screws then the lock will come out.

Once you have the lock out you can release the core by releasing the retainer pin. This lock has 3 wafers in positions 6 through 8.



GM Steering Column Course

Comes complete with take-home test so you can become certified on GM steering column service! Authoritative training on every domestic GM column from 1967 to 1995.

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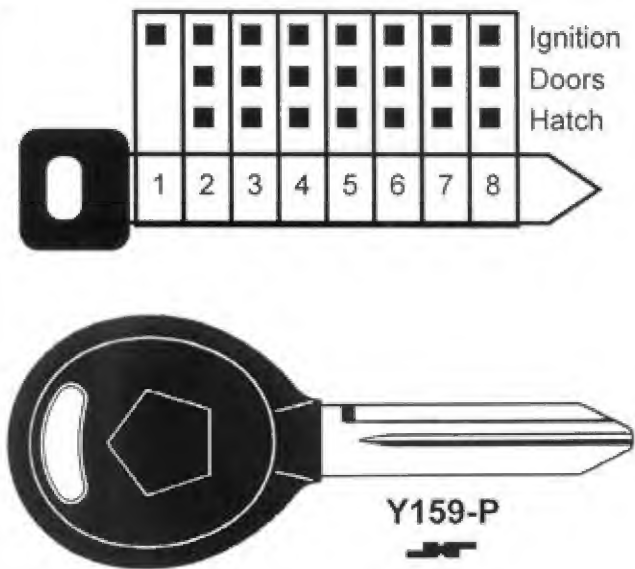
#GM - 2

MAKING FIRST KEY:

- Method #1**
Use a tool called an ‘EZZ-Reader’ to determine the cuts in the door for positions 2 through 8. Next, progression the number 1 cut (bow cut) in the ignition. You will then have all the cuts necessary for a complete key.
- Method #2**
Use the Chrysler Determinator™, available from National Auto Lock.
- Method #3**
Use tryout keys. Aero Lock tryout set TO-93.
- Method #4**
You must remove a door or trunk cylinder to decode it. Once you have those seven cuts, then you can progression the 1 remaining cut in the ignition. The missing cut needed for the ignition is the first one from the bow.

SPACE AND DEPTHS:

A CODE SERIES: M 001-M2618 (1998+ CHRYSLER)											
Bow		STANDARD SPACING						Tip	Cut to Cut: .092	DEPTHS	
1	2	3	4	5	6	7	8	1 .340			
.941	.849	.757	.665	.573	.481	.389	.297	2 .315			
Bow		FRAMON SPACING						Tip		3 .290	
1	2	3	4	5	6	7	8	4 .265			
.310	.402	.494	.586	.678	.770	.862	.954				
Key Blanks:										ILCO: Y157, Y159	SILCA: CY22, CY24
Reed Codes:		N/A				HPC 1200 CM		CX102			
Curtis Clipper:		Cam		Carriage		ITL MFG:		69			
		CHRY-5		CHRY-5A							
Pak-A-Punch		PAK-C5				M.A.C.S.:		2			
NOTES: FRAMON—Lay tip stop clip flat against left side of vise, then tip stop key against clip. Set first cut at .310 Chrysler / Dodge Transponder keys have a grey plastic bow.											



TNL

Auto Lock Service

Features photographs, illustrations, and instructions to service and repair various makes of foreign and domestic cars.



Published by:

**The
National
Locksmith**

#ALS - 1

**Auto
Lock
Service**

Covers opening and service techniques.

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The OM2000 from OSI Security

Part 2

Programming the OM2000



by
**Richard
Allen Dickey**

If you read my article last month on the Omnilock OM2000 we covered a little company history as well as the general description and disassembly of the lock. (See *photograph 1.*)

You will probably remember that the OM2000 combines electronic access control with a commercial Grade 1 lockset. The lockset is your choice of a Schlage or Arrow cylindrical lockset or a Schlage or Falcon mortise lockset. Now it is time to setup the lock and look at how to control the many features of the OM2000.

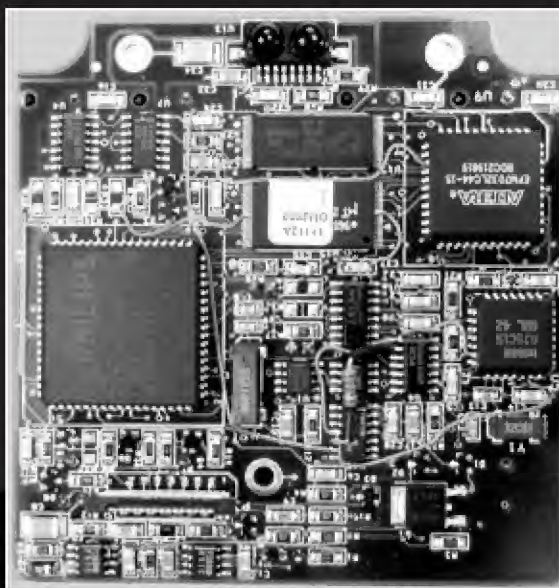
An onboard computer controls all of the features of the OM2000. The computer is on the main circuit board inside the lock housing. (See *photograph 2.*) After the lock is installed, it should be tested for proper operation before going through the full setup of the lock. Speaking of testing, that's where we are headed next.

After the lock hardware has been installed, you need to use the default programmer ID card to test various functions of the lock. To do this, briefly insert the card into the card reader with the printed side facing you and the arrow pointing down. When the card is removed, the green light on top of the Lock should begin flashing approximately once per second.

Turn the lockset handle within three seconds to gain entry. The lock should be in the unlocked



1. The OSI Security Omnilock OM2000.



2. A look at the computer that is built into the lock.



3. A notebook computer connected to a small hand held computer.

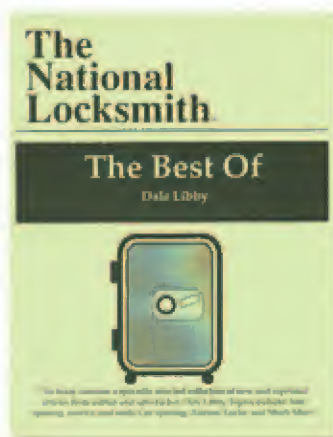
mode for five seconds. After five green flashes it will flash red and relock.

The next test involves changing the access level of the lock. Using the keyboard, enter the default Manager Code "2-2-2-2" and the green light should flash after the last digit entered. At this point the green light will flash once to indicate successful data entry each time a key is pressed. Within three seconds, enter the "2" once more (note the green flash), then press and hold the "CL" key. The green indicator will flash to indicate data entry. Continue holding down the "CL" button until the green light begins a sequence of three flashes. This should put the Lock into the unlocked mode. Test this by turning the lockset handle downward to confirm the lock will open.

To change the lock back to normal, enter the default Manager Code again.

Within three seconds after pressing the last "2", enter the keypad digit "5" then press and hold the "CL" key until the sequence of three green flashes begins. This

The Best of Dale Libby

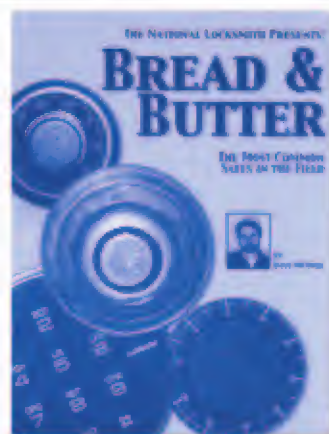


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#BB - 01



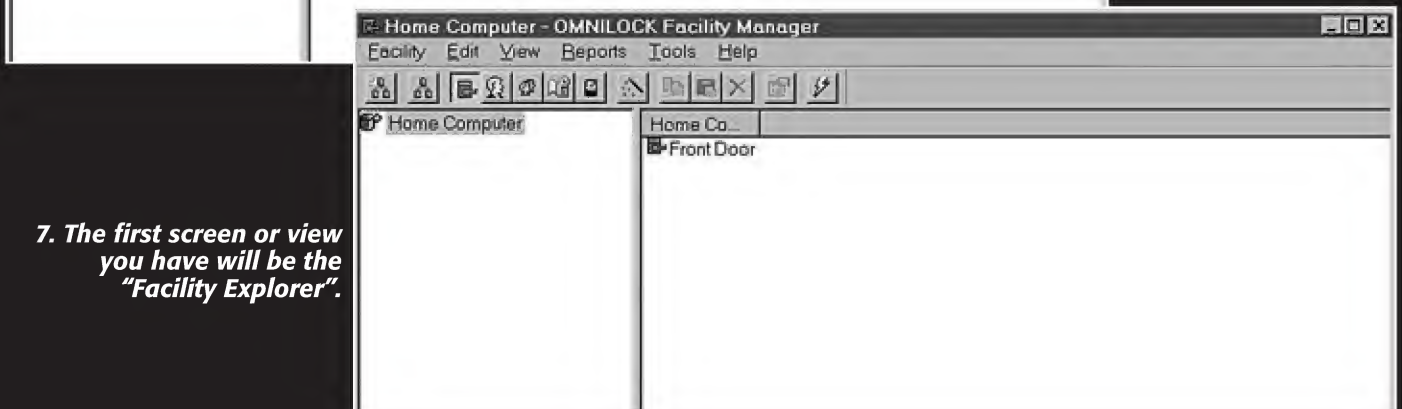
4. Click here to install the Data Link software to the hand held computer.



5. Click here to start the Facility Manager software.



6. Before you can access the software, a password is required.



7. The first screen or view you have will be the "Facility Explorer".

should put the Lock back into the "Enrolled ID Required" state and it will relock. Try turning the Lockset handle to ensure it is locked.

Insert the default programmer ID card briefly again into the card reader, then remove it. Turn the Lockset handle again within three seconds to ensure that one-time

access is granted. Make sure that after about 5 seconds the red light flashes and the Lock relocks.

That's all there is to test the lock. The lock is now in the Enrolled ID Required state and will allow access only for individuals using the factory Default Manager ID (2-2-2-2), the Programmer ID (1-2-3-4) or the

Default Programmer ID card. Now the fun starts. We are going to go through some of the software to look at a few of the available features.

To program the OM2000, you will need the programming software called "Omnilock Facility Manager" (OFM), a mobile device (small hand held computer) that runs Microsoft

Lock Properties

General | User Enrollment | Status

Name: Front Door

Open Delay: 3

Time Schedule: < None >

Install Date: 8/11/00

Battery Install: 8/11/00

Serial Number:

Model Number: OM2000

OK Cancel Apply

8. Double click the lock icon to view the general lock properties.

9. Click on the "User Enrollment" tab to view the users that have access to this lock.

Lock Properties

General | User Enrollment | Status

User Group: < All Groups >

Lock User	ID Type	Status
Ⓢ Dickey, Richard A.	Programmer	Pending Enrollment

Enroll Remove

OK Cancel Apply

Windows CE and a desktop or notebook computer. The big computer talks to the little computer (mobile device) through a cable. (See photograph 3.) The mobile device is the one you will carry to the lock to do the programming. If all of this seems a little complicated, don't worry, it is not as bad as it sounds.

The directions in the manual give a good description of software installation process. The only part of the process that could cause a little bit of a problem is if you decide to install the Omnilock Facility Manager software before you have a mobile device connected and working properly with your

computer. What happens is during the installation of the Omnilock Facility Manager software, it looks for a mobile device. If it doesn't find one, it will still install, but when you add a mobile device to your system at a later date, the Omnilock Facility Manager won't know it is there. To fix this you will have to reinstall the Omnilock Facility Manager software. It's no big deal, it's just one of those computer things.

Even though you have installed a mobile device on your computer as well as the Omnilock Facility Manager software, there is still one more step. You will need to transfer the Omnilock Data Link software to the mobile device.

The transfer is easy to do, just click the "Start" button on the computer desktop and then select "Programs". Move the mouse pointer over to the menu called "OSI Security Devices" and two options will pop up. One will be the "Omnilock Facility Manager" and the other is "Omnilock Data Link".

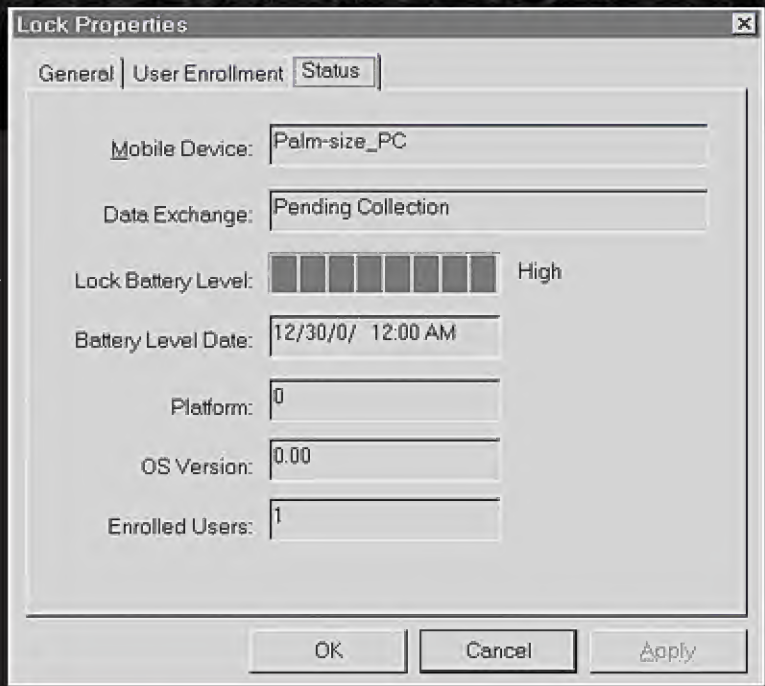
By clicking on the Omnilock Data Link button (see photograph 4), it will run a program that will install a version of the Omnilock Facility Manager software to the hand held device. You only need to do this once. After the Omnilock Data Link is installed to the mobile device, the Omnilock Facility Manager software will talk to the mobile device and pass information whenever needed.

The Omnilock Facility Manager software is a complex software package. It may seem intimidating at first but that is because of the incredible power and flexibility of the lock. A lock of this type is only as good as the software that goes with it and this is some heavy-duty software.

To start the program, click the "Omnilock Facility Manager". (See photograph 5.) The program will first ask you for your password. (See photograph 6.) The password was set up during the software installation. The first screen that is shown after the password is entered is the "Facility Explorer" screen.

This screen shows one facility at a time (not just a building but an entire complex) and the locks installed in that facility. (See photograph 7.) For

10. Click on the "Status" tab to check information about the actual lock.



this example there is only one lock in the facility and it is the front door. Specific information about each lock can be viewed by double clicking on the desired lock. Lets take a look at the front door lock by double clicking on it.

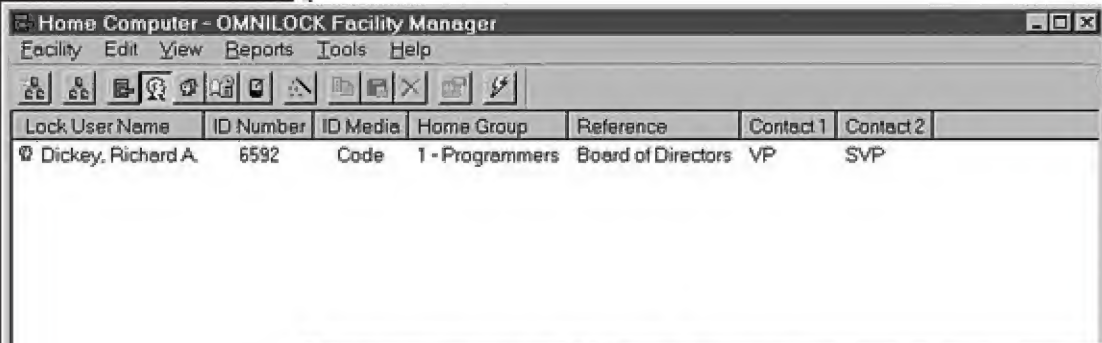
If you will notice in *photograph 8*, there is a window called lock properties with three tabs at the top. The first tab (already displayed) is general information about the lock. This includes things like the location of the lock, time delay etc.

The second tab shows user enrollment. (See *photograph 9*.) This will give you a list of users that are allowed access to this lock. The third tab gives you status information about the lock. (See *photograph 10*.) Here you will find things like the battery level of the lock as of the last

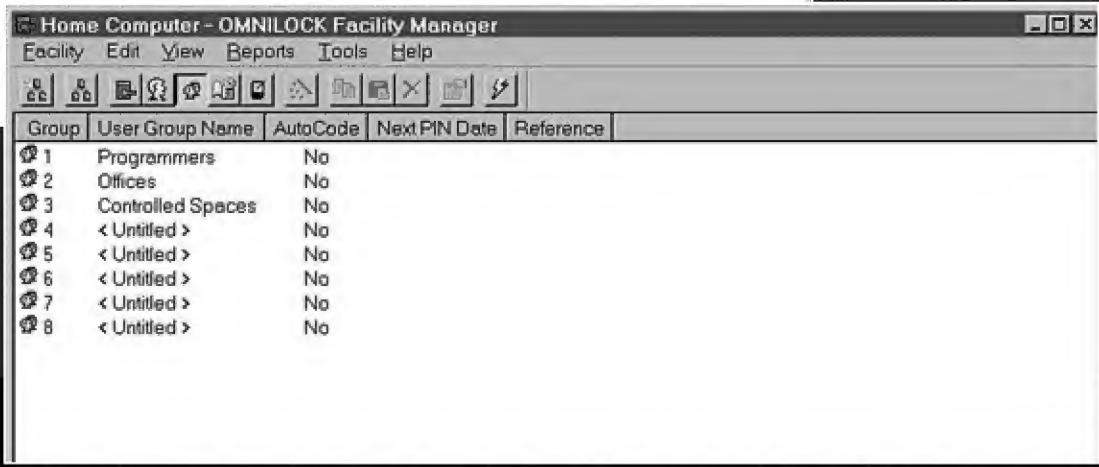
11. You can look at other information by changing "Views".



12. The "Users" view will display user information.

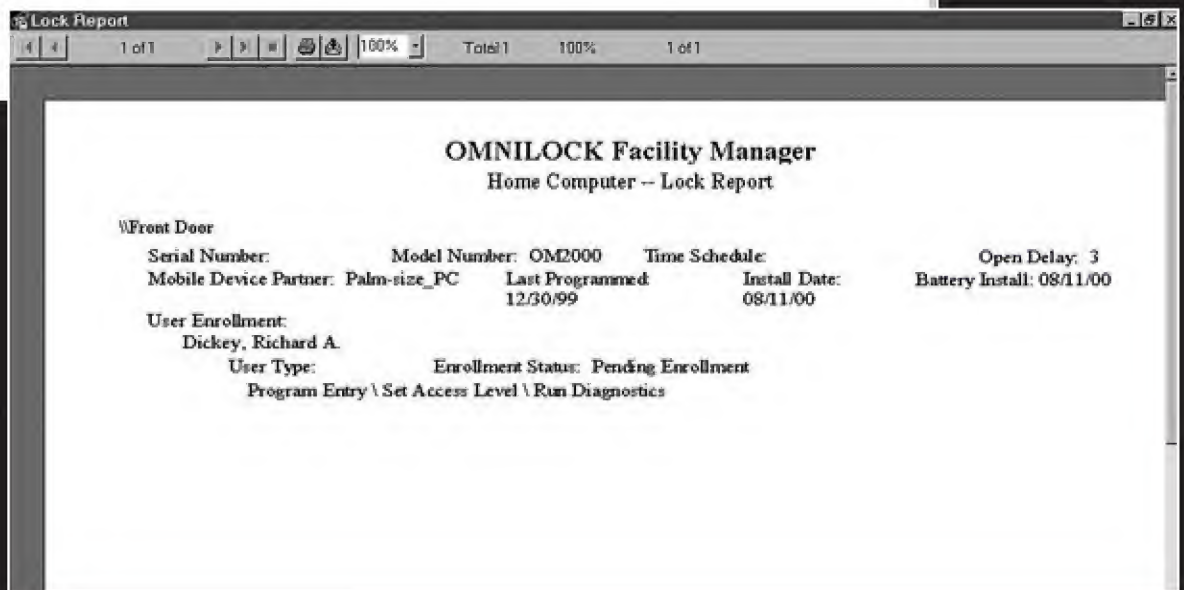


13. The "Groups" view will display information about the eight different groups.

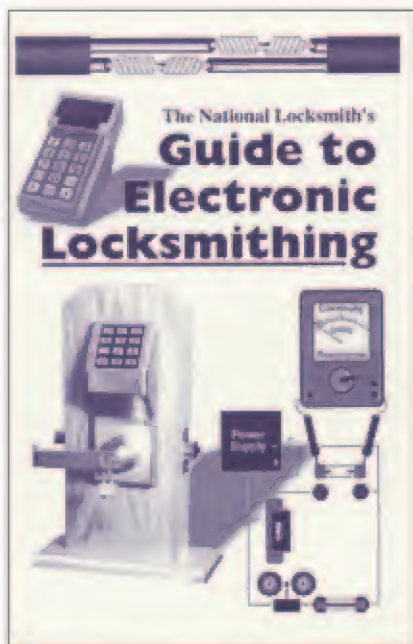




14. The "Mobile Devices" view will display all of the mobile devices that are associated with the facility.



15. A "Lock" report will list all of the locks in the facility and optionally show user enrollment



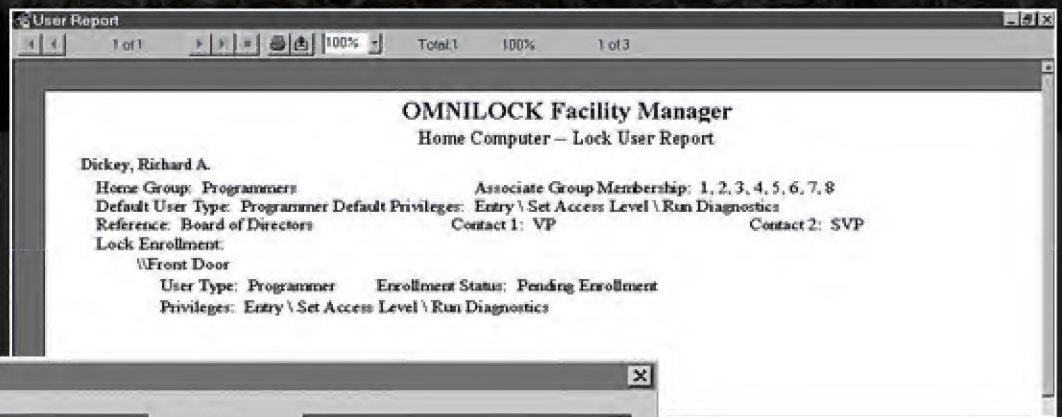
Electronic Locksmithing

Everyone knows there's big money in selling, installing and servicing electronic security such as mag locks, electronic strikes, and simple access control.

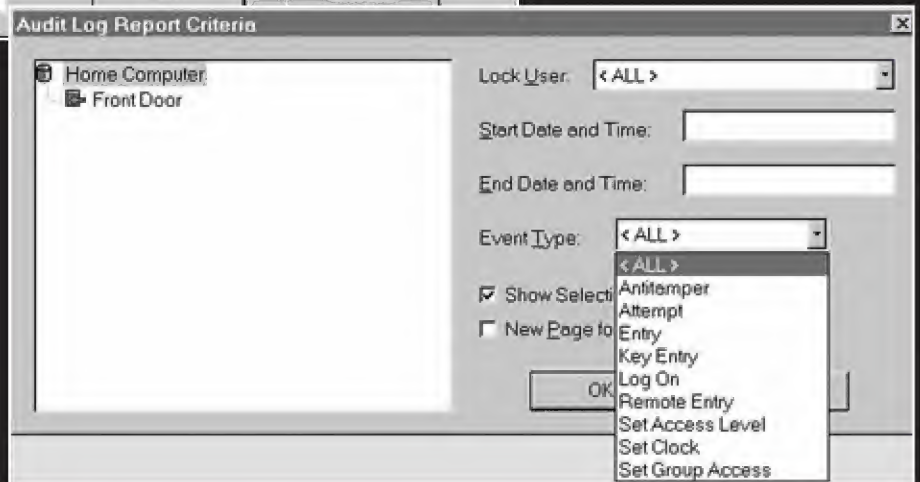
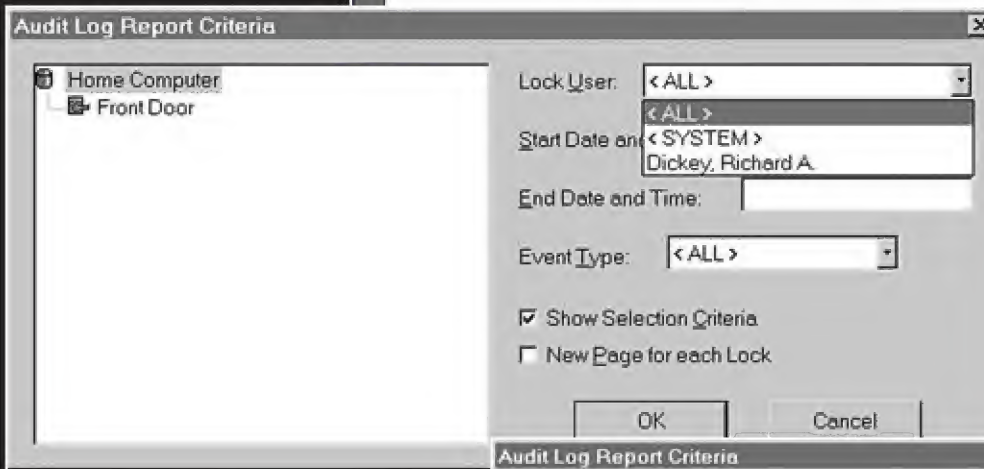
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16. The "User" report will list user information.



17. Setting the user option on the "Audit" report.



18. Selecting what you want to audit.

time the mobile device exchanged data with it, any updates pending and on and on.

Including the Facility view screen, there are five views available. (See photograph 11.) The users view will give you a list of users in the facility. (See photograph 12.) From this screen you will be able to tell if a person uses a card or code numbers to gain entry, the group they belong to and more.

The groups view will list all eight groups and tell you the group name if assigned and other pertinent information. (See photograph 13.) The fourth view is to display time schedules. This is a nice feature that allows you to change the access level and group accessibility of any lock for any part of the day or night.

The last view is the mobile devices screen. (See photograph 14.) Here will be a list of all the mobile devices used to program locks and retrieve information. This screen will tell you who has which mobile device and give you the data exchange status (updated information pending) for that device.

The reports section allows you to print a report on a lock, a user or an audit trail. Photograph 15, shows a

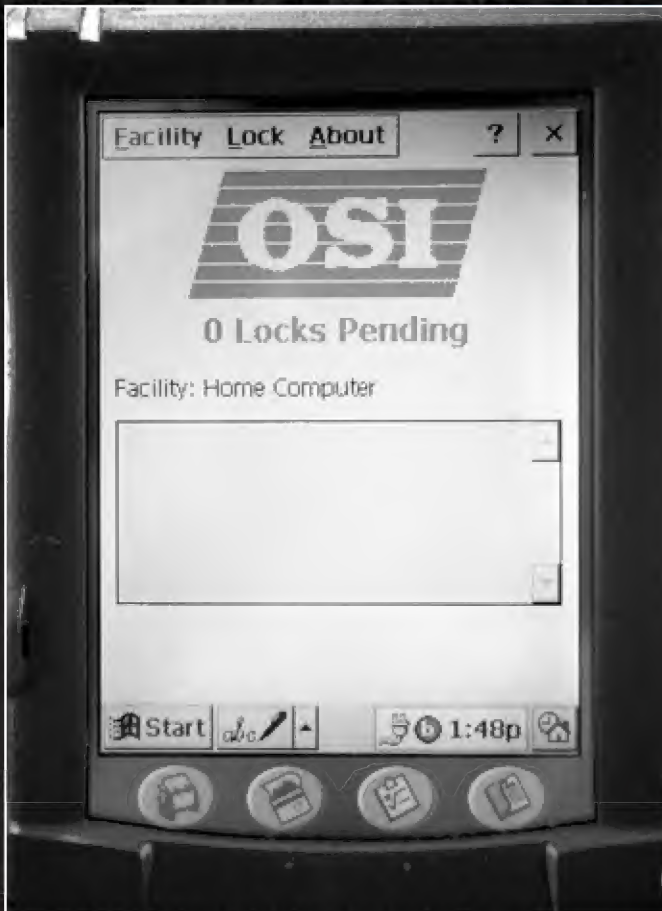
typical lock report, while photograph 16, shows a typical user report. Both reports provide a lot of useful information.

Probably the most asked about but least used report is the audit report. When you click on the audit report button, you have the ability to pick a specific lock to audit, a start and stop time, a lock user or all users (see photograph 17) and the type of event (see photograph 18) or all events. This gives the person making the report a tremendous amount of flexibility.

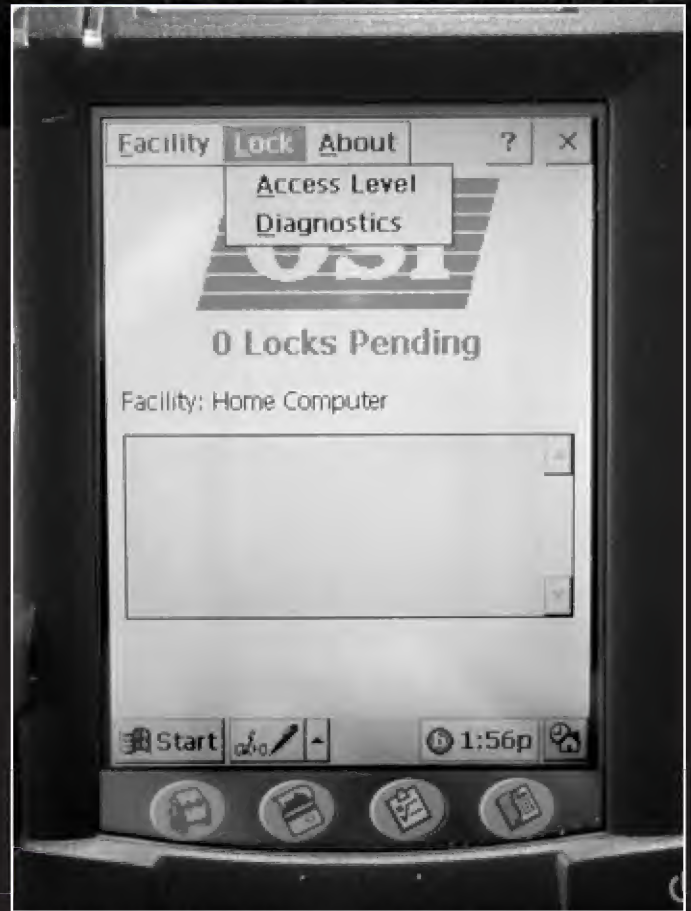
I could go on forever about all the things that the software is capable of, but I want to talk about the

mobile device just a little. These new hand held computers (mobile devices) have evolved to a level that allows them to do things that would have been unthinkable only a few years ago. By connecting the hand held computer to a larger notebook or desktop computer and downloading the appropriate software, these little things can carry large amounts of information to and from programmable locks. With the proper software they can even be used as test equipment. Let me show you an example.

Photograph 19, shows a typical hand held computer that uses the Microsoft CE operating system after



19. The hand held computer (mobile device) with the OSI Data Link software installed.



20. Accessing the diagnostics section.



21. Lock status information.

the Omnilock Data link software has been installed. If you click at the top of the screen on the word “Lock” a menu drops down that will give you two options. (See photograph 20.) The diagnostics option is the one that we will cover now.

By clicking the diagnostic button, the mobile device connects to the lock via an infrared connection. While connecting, the hand held computer gets information about the firmware of the lock (the version of software that the little computer chip inside the lock uses), battery voltage and other important things. (See photograph 21.)

While in the diagnostics section of the program, there are several options available. The two fun ones are the motor drive test “Drive test” and the keypad test “Test keypad”.

If you click the “Drive test” button you will hear the little motor inside the lock engage and disengage several times. This only takes about a second to complete.



22. Testing the motor drive by using the hand held computer.



23. Performing a keypad functional test while viewing the results on the mobile device.

The information you get back from this test includes battery voltage, motor voltage and current, how many times the motor was activated during the test and more.

If you choose "Test keypad" instead of the "Drive test", you will

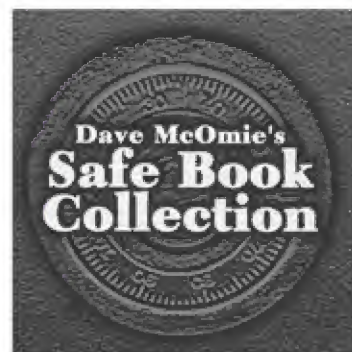
be able to test all of the buttons on the locks keypad. This test would be a great one to verify that there is not a keypad problem if someone complains that an access code doesn't open the lock when you know it should. The display on the mobile device shows a keypad that simulates the one on the lock. (See photograph 22.) If you press a button on the lock, it will flash on the mobile device.

Pressing "1" on the lock will make the "1" button on the mobile device flash. You can do this for each button on the lock as many times as you want. When you are satisfied that the lock is working fine, you can touch the "Log off" button on the mobile device and a message that says "Data exchange complete" is displayed. (See photograph 23.) Have you ever seen an electronic lock that can be tested like this without disassembly, removing it from the door or sending it back to the factory? Me neither!

I have only touched on a few of the capabilities of the OM2000 from OSI Security Devices. The capability of the OM2000 will probably far exceed any expectations you could have. It won't pick up your dry cleaning but it might dial the number for you.

For more information about the Omnilock OM2000, give Rick Rasmussen a call at OSI Security Devices. His number is 1-619-628-1000. You can fax a request to 1-619-628-1001. They also have a nice web site with downloadable information at: www.omnilock.com. Circle 266 on Rapid Reply. TNL

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#DMCD - 1

November 2000 • 53

Quick Entry

UPDATE

by
Steve
Young



2000 DAEWOO LANOS AND LEGANZA

The name Daewoo may seem new to the US marketplace, but they have been here since 1988. GM began a partnership with Daewoo in the mid 80's and brought the first Daewoo manufactured vehicle into the US in 1988. Their first car to be sold in North America did not receive a very warm welcome, especially from locksmiths. The first Daewoo vehicle to be marketed here was sold as the Pontiac LeMans. Many of us have had unpleasant encounters with this car over the years and have come to dread them.

The real problem with the old LeMans, from the locksmith's point of view, was the ignition lock, which was manufactured by Huf. That lock was notoriously hard to service and became famous for breaking keys and seizing up. Fortunately, the new Daewoo products use a very different lock system. Unfortunately, the old LeMans ignition lock lives on and is currently being used in the Cadillac Catera, where it continues to give locksmiths nightmares.

Today we have three Daewoo vehicles being sold in the US market. The smallest and least expensive Daewoo is the Lanos. (See photograph 1.) The largest and most expensive Daewoo is the Leganza, which is marketed as an "affordable luxury car." (See photograph 2.) In the middle is the Nubira, a mid-sized four-door sedan. All three vehicles use an eight-cut lock system that is very similar to those found on the Hyundai models.



1. 2000 Daewoo Lanos.



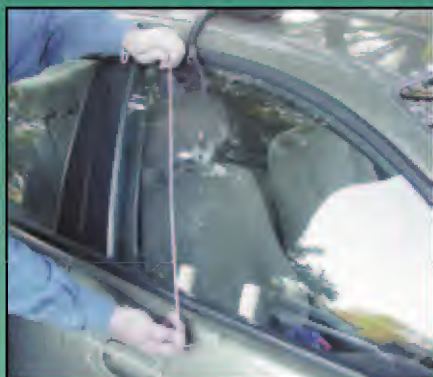
2. 2000 Daewoo Leganza.



3. 2001 Daewoo Korando.

Quick Reference Guide

Vehicle: 2000 Daewoo Lanos	Code Series: Lanos - T0001 - 1200, Leganza - V0001 - 1200
Direction of Turn: Clockwise (passenger side)	Key Blank (Lanos): Silca DW05R, OEM S6460019
Tool: TT-1003 (short end)	Key Blank (Leganza): Silca DW04R, OEM S6460036
Bitting: Ignition, door & trunk 1 - 8, glove box 5 - 8	



4. Wedge open the door just forward of the outside door handle.



5. Inside the door of the Daewoo Lanos.

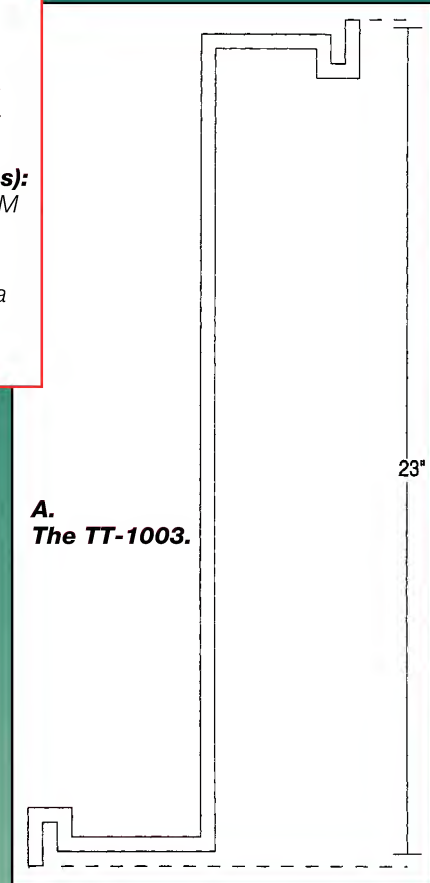


6. Inside the door of the Daewoo Leganza.



7. Bind the linkage and then lever the linkage forward.

**A.
The TT-1003.**



summer. (See photograph 3.) The vehicle was to have been based on the short wheelbase Isuzu Trooper platform. In addition, it was supposed to have had a dual overhead cam, fuel-injected inline six-cylinder engine manufactured under a license from Mercedes Benz. The launch of that vehicle has been postponed, perhaps permanently, due to financial difficulties. Both GM and Ford have been in negotiations with Daewoo and at this time, it appears that Ford may eventually own Daewoo outright.

When it comes to unlocking the Daewoo vehicles, the Lanos and the Leganza are very similar. Both vehicles feature a horizontal linkage system that is relatively easy to attack. The Nubira uses a vertical linkage system that I will cover next month. One of the many odd features that I noticed about the Daewoo vehicles was that the door latches are virtually identical to those that GM has been using since 1991. On these latches the inside lock control linkage is the lower of two horizontal linkage rods, and the lock control linkage must be moved toward the front of the vehicle to unlock the car. On both the Lanos and the Leganza, the linkage rods cross over each other between the latch and the inside lock control. At the point where the linkage rods are visible inside the door, the lock control linkage is the upper of the two rods.

To unlock either the Lanos or the Leganza, begin by wedging open the weather-stripping at the base of the window just forward of the outside door handle. (See photograph 4.) Insert an inspection light and visually locate the horizontal linkage rods. On the Lanos, the rods will be very close together - almost touching each other. (See photograph 5.) On the Leganza, the rods will be separated by about an inch. (See photograph 6.)

Insert the short end of the TT-1003 (see illustration A) tool into the door and hook it onto the upper linkage rod. Twist the handle of the tool in order to bind the linkage and then lever the linkage rod forward to unlock the door. (See photograph 7.)

Both of these vehicles can be unlocked by feel, but the use of an inspection light makes the job a lot easier. In addition, both of these vehicles can be unlocked with the Tech-train "Jiffy-Jak Vehicle Entry System". **RL**

Unfortunately, each vehicle has a different key blank and code series. The codes are not stamped on any of the locks, but the trunk lock can be removed and decoded with relative ease. All three vehicles feature as

standard equipment an inside trunk release that is mounted on the floor next to the driver's seat.

Daewoo had planned to introduce a sport utility vehicle, the Daewoo Korando, into the US market this

Framon code cutting machines



Framon #2 Code Machine

The #2 has been Framon's flagship code machine for over 30 years. Originally introduced as the #1 Code Machine in 1970, the #2 added a tilting spindle to cut Medeco and Emhart keys. The machine is sold as a complete code-cutting package; out of the box the machine is capable of cutting almost any cylinder key in use today, including Medeco Commercial and Bi-Axial.

Standard Equipment

Included with every #2 Code Machine are the following: five spacing blocks, dial calipers, Framon's Depth & Space Manual, a standard cutter (84° angle, .045" flat), an automotive cutter (87° angle, .035" flat), a Medeco and Emhart cutter (86° angle, .015" flat), a flat steel slotter (.045" width), a spacing clip (for shoulderless keys), a brass shim, demonstration video, and a 1/8" allen wrench.

Machine Operation

At the heart of the #2 Code Machine is the Framon Depth & Space Manual. The manual has over 300 depth and spacing charts covering cylinder, automotive, motorcycle, safe deposit, and locker information. The book gives the user all necessary depth and space information to cut almost any cylinder key in use today.

To begin, secure the key blank in the vise. With the key in the vise, set the

code machines are an inherent part of a locksmith's daily business. Locksmiths' normal routines include cutting keys from a code number, originating keys for a master key system, and making first keys for cylinders. Framon Manufacturing Company has been producing key machines since 1970 to help locksmiths complete these tasks quickly and easily. In this article, we will look at three different Framon key machines: the #2, KX-1, and FRA-2001. Each machine has different features that make them attractive time savers in different applications. Before discussing the differences in the machines, let's first look at what the machines all have in common:

1. All three machines use a straight in feed. While most duplicating machines today use a pivoting feed, Framon code machines create a square cut on the bottom of the key. The cutter meets the key at a 90° angle. This assures that the depth from one side of the key to the other is the same. **Illustration A**, shows an exaggerated end view of a key that has been cut with a pivoting feed machine. If you have ever cut a key that will turn one way in a lock but not in the other, this is typically the cause. The area where the pin

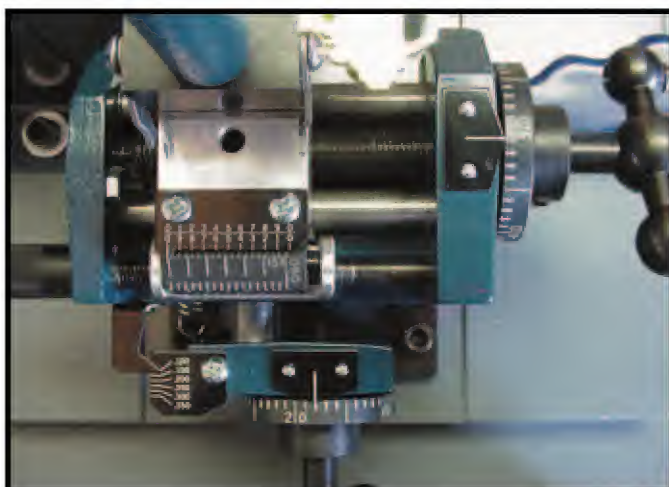


A. An example of a key cut with a pivoting feed machine.

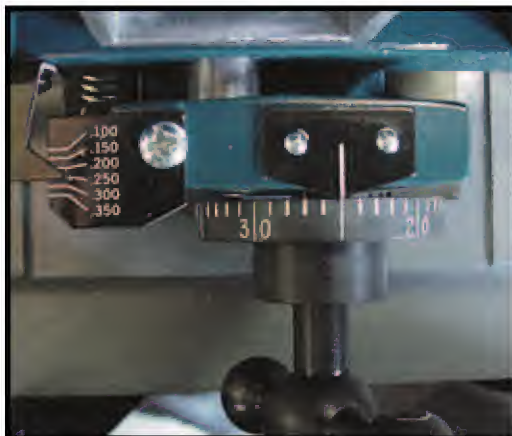
tumbler rests has a high side and a low side.

2. Sealed ball bearings are used throughout all of the machines. The cutter spindle rotates on two sealed bearings. The bearings require no maintenance and provide quiet operation. Only in rare cases do the bearings ever need replacement.
3. All machines are made of steel and aluminum for long life and durability. Framon key machines have a reputation in the industry of being "built like a tank."
4. They offer the excellent customer support. When your phone call is answered, you will be speaking with someone who knows the machine inside and out. In the rare case that they can't answer your call immediately, you will normally be called back within 30-minutes. Remember, anything mechanical will eventually need service, be it 5, 10, or 20 years down the road.
5. All Framon key machines are covered by a one-year, parts, labor, and freight warranty. Any machine found to be defective in the first year will be picked up from the customer at Framon's expense, repaired or replaced, and returned to the customer at no charge. Cutting wheels are not covered under the warranty.

With the similarities covered, let's look at each machine individually to better understand their differences.



1. Align the proper spacing block.



2. The depth set for a #4 depth, .275".

starting cut for the key by rotation of the spacing crank. For a standard Schlage key, the starting cut position is .231". One rotation of either the depth or spacing dial is .050". For a Schlage key, this means four complete turns plus .031" for the first cut position. Next, align the proper spacing block (.156) with the indicator. (*See photograph 1.*) By using the spacing block, the user does not need to count out each progressive cut. Simply align the indicator with each line on the block for successive cuts.

Depth settings are done by micrometer in thousandths of an inch. This is what gives the #2 its extreme accuracy (.0005"). *Photograph 2*, shows the depth set for a #4 depth, .275".

Once the spacing and depth are set for the cut, pull the feed handle to make the cut. The carriage will come to a complete stop, and the proper depth of cut is now made. Release the feed handle, turn the spacing crank to the next position on the spacing block, reset the depth for the next cut, and pull the feed handle. Continue in this manner until all cuts are made. Originating a six-pin key on the machine takes approximately 35 seconds.

Year-to-Year Costs

Another strong point of the #2 is the yearly cost of operating the machine. The #2 only requires depth and space information to originate a key. This information is readily available through trade magazines, or from their web page, www.framon.com. There are no extras to buy each year to remain updated.

#2 Applications

The Framon #2 is good equipment for locksmiths looking for an all around code machine. Be it a cam lock, automotive ignition, or safe deposit lock, the #2 can handle the job. The #2 is suited for shop or mobile use, and rarely needs to be adjusted even after a bumpy ride in the van.

Ask Dave



You asked. He answered. This is safe and vault Q&A with an attitude.

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#AD - 1

Framon KX-1

Introduced in 1997, the KX-1 is designed for end users cutting only a few types of cylinder keys, or locksmiths cutting a high volume of keys for a few set applications. The machine utilizes "kits", which consist of a depth cam, spacing cam, cutter and vise to quickly and accurately originate keys. The machine is sold as a base model and the desired kit is then added to the machine to allow the user to originate keys.

KX-1 History

In 1988 ASSA High Security Locks

contacted Framon about manufacturing a code machine that would quickly and accurately originate ASSA's Twin 6000 keys. The PS-6000T was designed in conjunction with ASSA engineers to handle the job. In 1997, the machine was redesigned to accommodate other manufacturers, and the KX-1 was born. ASSA continues to supply the KX-1 to its end users needing a quick, easy way to cut a high volume of keys in a short period of time.

Machine Operation

Similar in design to the #2 Code Machine, the KX-1 replaces the

spacing and depth dial with manufacturer-specific cams. (*See photograph 3.*) The user simply turns the cam to the proper spacing and depth position, and pulls the feed handle to complete the cut. Once the cut is made, turn the spacing cam to the next position, turn the depth cam to the proper depth, and feed the key into the cutter again. The KX-1 can originate a six-pin key in about 15 seconds, accurate to .0005".

Changing Machine Setup

The user can change the KX-1 from one manufacturer to the next in about two minutes. For most applications, only a cam change is necessary. An Allen screw holds the cam to the machine, and can be changed in about one minute. If a cutter and vise change is also required, these can be accomplished in under two minutes. No adjustment to the machine is needed when switching from one manufacturer to the next.

KX-1 Applications

The KX-1 is a useful tool for locksmiths who already own an all-around code machine like the #2, but work regularly with a few major lock manufacturers. The KX-1 shaves time off of large master keying jobs. If your company uses high security cylinders such as ASSA, Kaba, or Schlage Primus, the KX-1 can be ordered setup to cut any or all of these keys. Instead of going through a cutter change on your standard code machine whenever a customer needs a single key, having the KX-1 nearby makes the job quick and easy. Kits can be ordered for the KX-1 to cut most of the major cylinder manufacturers, both standard and high security.



3. The KX-1 replaces the spacing and depth dial with manufacturer-specific cams.

FRA-2001 Code Machine

Introduced in 1997, the FRA-2001 is Framon's computer-driven code machine. It is different from other computerized code machines in that it requires a computer to run the machine. The 2001 has no onboard computer; all key cutting information is sent from a Windows-based PC.

The FRA-2001 Software

The software supplied with the FRA-2001 covers almost all daily key cutting tasks in one convenient package. *Photograph 4*, shows the main screen of the program. The standard software includes a manufacturer's database, which covers all of the



4. The main screen of the program.



5. To originate a Schlage key, simply type in "Sch".



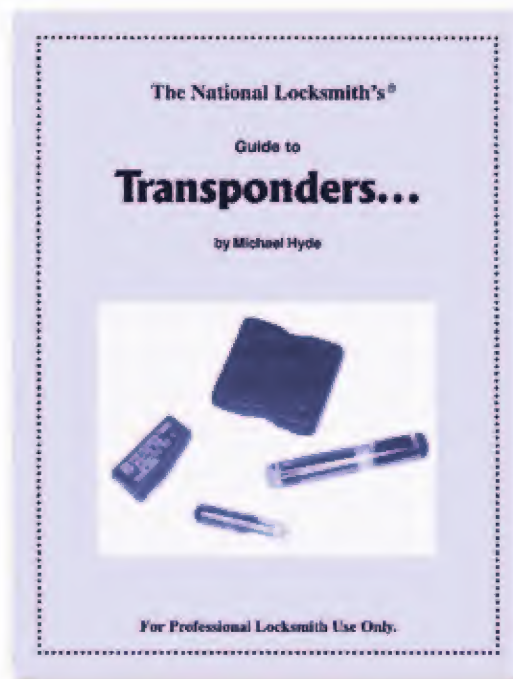
6. Click on the "Cut The Key" button.

cylinder keys included in their Depth & Space Manual. To originate a Schlage key, simply type in "Sch" and the program will scroll down to the closest manufacturer match in the listing. (See photograph 5.) Select the proper chart (five or six pin), enter the cuts for the key, and click on the "Cut The Key" button. (See photograph 6.) In about 18 seconds, the FRA-2001 cuts the key to factory specs. The FRA-2001 does not cut angled cuts.

A complete code database is included with the software, making code retrieval a simple procedure. To look up a key by code, click on the Codes button. Pick which type of key you wish to look up (Utility, Vehicle, etc.), and enter the code number. (See photograph 7.) The software will then give you several choices based on the information entered. Pick the appropriate selection, and you will again be viewing the key cutting screen. This time, however, the cuts will already be entered; all you have to do is insert a key blank and click on the "Cut The Key" button. Again, in about 18 seconds the key will be ready.

The FRA-2001 also has a companion master key program available. The program can be ordered with the machine or added on later. Masterkey allows you to design a master key system, determine your level, pick out and cut keys on the FRA-2001 machine and detail the use of each key selected. (See photograph 8.) Old systems can be entered, company logos can be added to printouts, and a variety of other useful features make Masterkey a great addition to the machine. Masterkey can also be used as a

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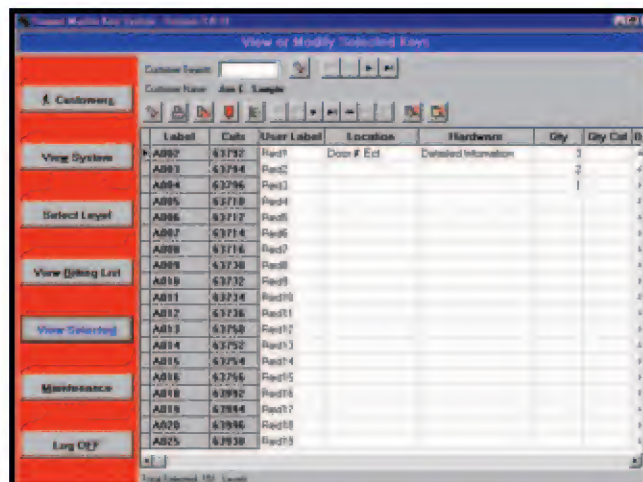
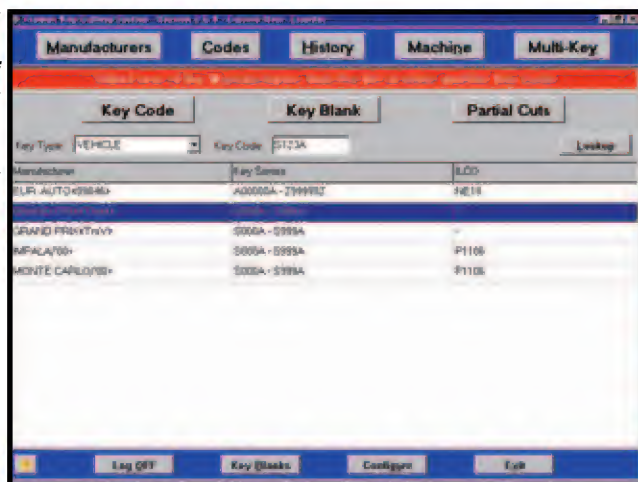
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#TS - 2001

November 2000 • 61

7. Pick which type of key you wish to look up.



8. Masterkey allows you to design a master key system determine your level, pick out and cut keys.

stand-alone master keying program.


Machine Features

The FRA-2001 is packed with features that any locksmith will find useful in the shop. A user list can be set up to prevent unauthorized users from adjusting the machine or viewing biting lists in master key systems. Keys can be added to the History database after generating to keep on file for a customer. All cutting adjustments to the FRA-2001 are done through the Machine section of the software; depth and spacing adjustments can be made in .001" increments without touching the machine itself. A walk-through of the software is available on the Framon website, www.framon.com.

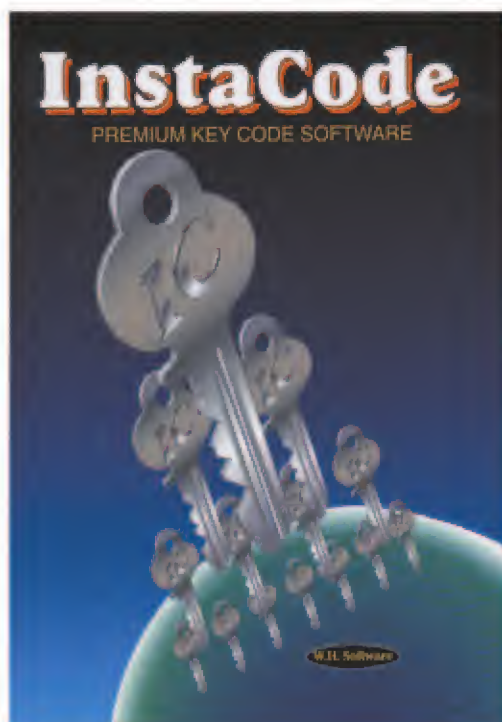
FRA-2001 Applications

The FRA-2001 is a time saving addition to any lock shop. ASSA High Security Locks sells the FRA-2001 to many of its end-users to maintain their master key systems and for originating ASSA keys. For busy shops, the FRA-2001 cuts down on key originating time, especially when generating large keying systems.

Contacting Framon

If you would like more information on the Framon line of key cutting machines, feel free to contact them by phone at (517) 354-5623. Framon's website is www.framon.com, or e-mail them at sales@Framon.com. They also offer a demonstration video rental (deposit required). Their products are sold through your local distributor. You can also contact their central distributor, Somerset Security, at (732) 356-840. Circle number 265 on Rapid Reply. 

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#IC - 2001

LTI Door & Trunk Reforming Tool



by
Bob Sieveking

The call came in about 7:30 AM. I wasn't out of bed yet. It was a fairly simple request. The customer said he needed his trunk lock fixed, and could he bring the car over. I told him to be here after nine, because that is when we open. I should have asked a few more questions about how much "fix" he had in mind.

Well, nine o'clock came, and my customer was waiting on the drive with his "Blue Demon." I guess everybody has a pet name for their ride. He explained how he had a flat tire a week or so ago, and realized that he had never had a key for the trunk. Well, in the heat of the moment he did the only thing he could.

Photograph 1, shows the result of his effort. In this photograph, I have already "bumped" the edges of the hole back a little. By the looks of the

rust, there hadn't been a lock in this trunk lid for quite a while.

I asked if he had the old lock, and he produced a large screw driver from his back pocket, opened the trunk, and began searching through a damp pasteboard box full of odd used auto parts. This was his "running spares" collection. He had nearly everything, but no trunk lock. After a few minutes, he shrugged and just said, "Musta fell out somewhere."

We talked about the extent of the damage, and struck a deal that would include making a key for the doors, matching the trunk lock to the door key and repairing the metal.

Looking at *photograph 1*, you might think this is going to be a big job, but I have a little trick that makes short work of just such a situation.

The Lock Technology Door & Trunk Lock Reforming Tool is not new, but you may not have seen it before. (See *photograph 2*.) The tool is not complicated. It is composed of two forming dies, connected by a grade 8 cap screw. The dies are designed to

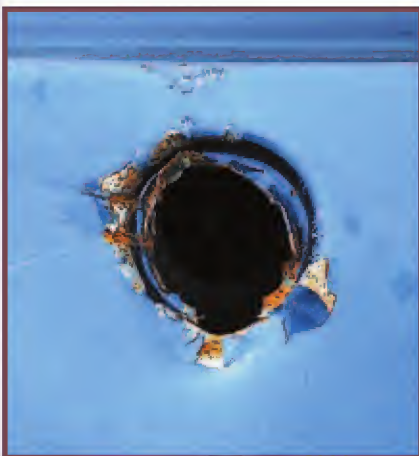
reform the sheet metal around the lock, creating the familiar "dish" shape of the original lock mounting. If you are repairing a door, you can reverse the dies to make a flat repair. In our case, the trunk lid is dished.

There was a "tear," the width of the screwdriver used to pry the lock into the lid, which had to be bent back.

With the hole roughly back in shape, I positioned the bottom block, or forming die, inside the trunk lid to accept the puller bolt. I threaded the bolt and top forming die into the bottom die, and tightened the bolt.

Photograph 3, shows the tool installed in the trunk lid. Not only was the hole misshapen, but the metal was pushed in on the left side. With the tool still tightened in place, I bumped the backside of the tool to bring the body metal out a little.

When I removed the forming tool the lock hole has been restored to its former shape. (See *photograph 4*.) This was done in less time than it takes to read this article. Not bad for a quick job.



1. The aftermath of a forced trunk lock removal.



2. The LTI Door & Trunk Lock Reforming Tool.



3. The LTI tool installed in the trunk lid.



4. The lock hole has been restored to its former shape.



5. The finished repair.

While I was bumping out the metal, and removing the forming tool from the trunk lid, my customer was digging around in the front seat for something. He appeared at the back of the car with a smile, and presented me with a tiny bottle of OEM General Motors "Duplicolor" scratch repair paint. (What-a-guy.)

"Would you mind putting a little paint around the hole before you put in the new lock?" he asked.

I really didn't want to get that involved in this job, but I Dremelled

off the chipped paint, and applied the first coat of lacquer to the bare metal. It didn't look bad.

The paint was allowed to dry, as I made the door key and combined the new replacement trunk cylinder. When I returned to the car, I buffed the spot with a little wet and dry sandpaper and applied a second coat of paint.

The replacement trunk cylinder was installed using an OEM molded rubber gasket ring. The larger gasket hides most of the repair. *Photograph 5*, shows the finished job.

Reforming Tool is a simple solution to a common job. It does what it is supposed to do, and the results speak for themselves.

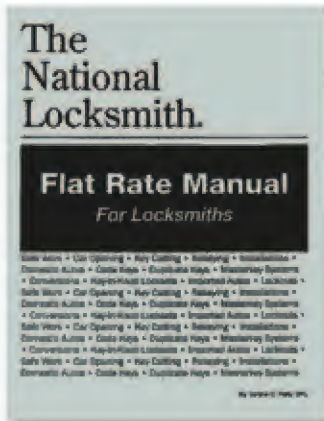
The repair was done in about an hour, and I was proud of the results.

For more information on the trunk reforming tool or other LTI products circle 268 on Rapid Reply or contact:

Lock Technology, Inc.
552 S. Washington St. Ste. 108
Naperville, IL 60540
Phone: 800-421-7241
Fax: (630) 983-5967 **LTI**

The LTI Door
& Trunk Lock

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#FRM - 1

Drilling Safes



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#DS - 1

the new LaGard MultiGard



MultiGard, an electronic access control device designed to control operation of multiple door safes, is being introduced by LaGard.

The new unit, which includes audit trail, time delay override and over 50 programmable codes, enables pre-determined users to open not only the outer door, but also all authorized inner compartments with a single code. The MultiGard can also be programmed for different levels of security to a safe through the electronic keypad or through a PC.

“LaGard engineered the MultiGard in response to the market demand in the commercial environment for a single electronic lock that could control every door in a safe, while at the same time allowing various levels of security access to different users, said George Chenarides, director of domestic sales for LaGard. “When the timing, engineering, components and competitive pricing fall into place, we are able to bring the advancements in technology to the market,” he added.

The MultiGard design is based upon LaGard’s SmartGard. It incorporates all the design features of the SmartGard plus numerous advancements.

The UL listed MultiGard permits predetermined users to access up to two locks from the outside by simply entering a changeable pre-programmed code on the outer electronic keypad of the mechanism. If there is more than one inner compartment or secondary outer door, there is an optional controller module that allows the user to open an additional three doors for a total of five doors being controlled with one authorized code. LaGard anticipates the lock will eventually have connections for up to seven locks with up to five additional doors.

Storing over 50 programmable codes, the MultiGard also provides various levels of access, depending on the code entered into the electronic keypad. There are two programmer codes, four manager codes, two auditor/loss prevention codes, two time delay override codes and 48 user codes. Each different code type allows a different level of access into a safe.

Further enhancing security, the new lock, which self tests on every power up, has a wrong try penalty of five minutes after four consecutive invalid codes entered.

The audit trail feature has a storage capacity of up to 1,200 events. This provides auditors and loss prevention personnel information on who has been accessing the safe and the times and dates of when doors have been opened and closed, or when manager functions have been performed.

"Our audit trail makes anyone who is accessing the safe accountable for their actions. Every time someone enters their code, the audit trail records it, meaning that an auditor will know exactly when the safe is being accessed, how long the safe remained open, and by whom the safe was opened or what programming action has taken place," Chenarides said. The lock can have two programmers and four manager codes. Audit codes are separate and do not open the lock.

A new feature being adapted in the MultiGard is a time delay override that allows the use of an electronic key and PIN number. This feature allows those customers that prefer to access with a PIN only during normal operation the ability to have an electronic key for armored courier pickups. Armored car personnel can use LaGard's time delay override feature to access all safe doors immediately rather than waiting the usual 10 to 15 minutes, making pick-ups and drop-offs quicker and safer.

MultiGard also has multiple time lock capabilities, dual control, multiple language readout, an easily retrofitable design and non-volatile memory. Along with the standard features, available options include a plug-in low voltage AC adapter, duress, a large battery box and the connector module allowing the user to open three additional inner compartment doors. The optional module also stores a "mirrored" audit trail.

The concept of the MultiGard is an evolution of LaGard's SmartGard, making it a new product based on a tried and true design.

"Electronic locks have become not only more reliable, but offer higher security than mechanical locks," said Susan Papa, vice president of sales and marketing. "As for the MultiGard, we chose to use our extremely reliable SmartGard design, and incorporate it into the MultiGard so as not to sacrifice the durability and reliability of the product," she added.

For more information on LaGard products
call: (310) 325-5670;
Fax: (310) 325-5615;
E-mail: susan.papa@lagard.com;
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#SUB - 1,2,3,4,5,6

LEARNLOK FROM ILCO, PART 2

BY SAL DULCAMARO



Last month we installed the Ilco LearnLok, this month we will go through the programming procedures.

LearnLok Programming

Photograph 1, shows the seven numbered and color-coded programming cards for LearnLok. Just below the arc of those seven cards is a user card, a user cancel card and the test card. It's hard to imagine a simpler programming procedure for an electronic card access lock.

The test card is mainly used during installation to make sure that the cable or electronics of the lock are not damaged during the installation process. Once the programming process has begun, the test card will no longer work on the lock unless the power supply is interrupted (the battery is removed) and the lock returns to original default settings.

LearnLok programming is extremely easy. Over the years I've seen a number of very interesting electronic locks, but often times I would be very hesitant to entrust the average customer to be able to program the lock by him or herself. A customer would have to be very dense to find this programming process anything other than simple. The numbered and color-coded programming cards and everything else is almost self-explanatory.

The Starter Pack is a multi page folder that holds the seven programming cards (plus programming instructions), and sets of ten User cards and ten corresponding User Cancel cards. The programming cards are the heart of the security of the

LearnLok system. They are a matched set and you cannot substitute a Learn card or Passage card from another set of seven. If they end up in the wrong hands, the security of all locks in the system will be compromised. Each lock can accept up to 200 programmed user cards. User packs of 25 User cards and 25 User Cancel cards can be purchased separately (without additional programming cards) for as many users you may have for the locks to be programmed.

All the programming cards are numbered, so there should be no

accept specific User or Master Level cards. It can only be used after the Start-up card has been used first, but you don't have to start programming user cards until you are ready. All other programming cards will work on the lock after the Start-up card has set the facility code, even if no specific User cards have yet been programmed. The programming cards are used the same way as user cards. They are swiped downward through the reader with the magnetic stripe positioned in the path of the reader. Arrows on the cards help you to properly orient the cards for operation or programming.

Enrolling User Cards

Enrolling a User card is the process that programs the lock to accept that particular card. The Learn (#2) card is needed to enroll all User or Master Level cards. After swiping the Learn card, you have one minute to swipe a User card or it will exit the Learn mode. If the time expires, you will have to swipe the Learn card again.

There are different levels of User cards. A Master Level 1 card allows access even if the deadbolt is engaged. This applies to mortise locksets that have a deadbolt. Storeroom function mortise and cylindrical locksets don't apply. A Master Level 1 card can also place a lock in the passage mode. Master Level 2 cards also allow access when the deadbolt is engaged, but cannot place a lock in passage mode. A Master Level 2 card only makes sense with mortise locks that have deadbolts. On a normal storeroom function lock, it would act essentially the same as a normal User card. A User card will only



1. The seven numbered and color-coded programming cards.

confusion when programming the locks. The #1 card is the Start-up card. This card sets the facility code so that programming cards from no other Starter Pack can operate the locks in your system. It is only used when the battery pack is first installed or if batteries need to be changed and the memory has been lost. Once the facility code is set, you shouldn't have to re-use that card on the lock.

The #2 card is the Learn card. It puts the lock in Learn mode, and allows you to program the lock to

allow access if the deadbolt is not engaged. By extending the deadbolt on a mortise lockset, you effectively lock out standard User cards.

When specific User cards are enrolled, they will be mated with specific User Cancel cards. A User Cancel card cancels out its corresponding User card. This is an excellent feature, which allows you to lock out a specific user without having to retrieve the key that he or she used to gain access. All you have to do is swipe the User Cancel card, and the matched User card is locked out.

Let me get back to the User card enrolling process. Once the Learn card has been swiped, you have less than a minute to start enrolling a specific User card. The enrolling process is slightly different for standard User cards and Master Level 1 or 2 cards.

Enrolling a User and an Associated User Cancel Card

The Learn card is swiped once and the indicator light illuminates green. Within one minute, a new User card should be swiped once. After the new card is swiped, the indicator should illuminate green and red. Then the intended associated User Cancel card should be swiped once. The indicator should illuminate green.

If you don't allow a minute to elapse you can repeat the procedure with more matching User and User cancel cards, until you program all the cards you need. If you try to exceed 200 users, the indicator flashes red, green, and then red again to indicate the buffer is full. If you are done enrolling cards, you can either wait for time to expire or swipe the Learn card once more to exit the Learn mode.

When enrolling a Master Level 1 or Master Level 2 card, you will use the same cards as when you program a standard User card. The only difference is the programming procedure and the level of access.

Enrolling a Master Level Card

The process for enrolling a Master Level card is very similar to enrolling standard User cards. The primary differences are the number of times you swipe the card and the fact that Master Level cards do not have corresponding User Cancel cards.

While still in Learn mode, you can make a card a Master Level 1 card by

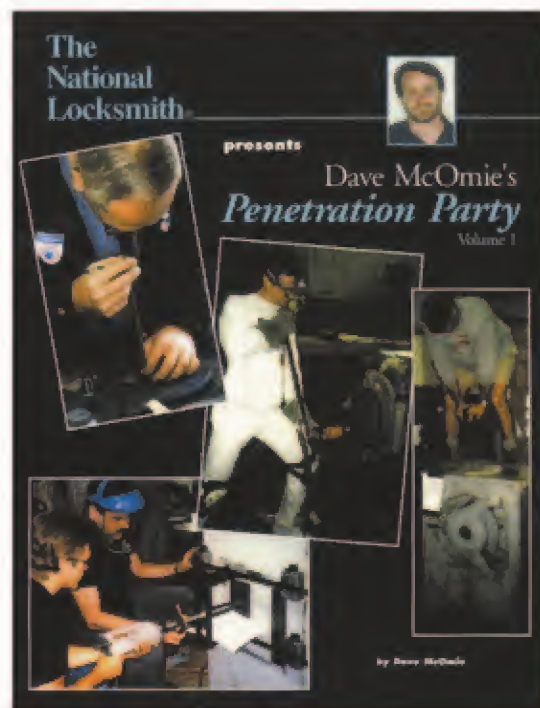
swiping the same User card three times within one minute. The indicator should illuminate green and red after the first swipe, green after the second and flash green after the third. That completes the enrolling process for that particular Master Level 1 card. No User Cancel card is used.

The process is nearly identical for a Master Level 2 card. After swiping the Learn card (or if it is already in Learn mode), you must swipe the intended User card two times within one minute. After the first swipe, the indicator illuminates green and red. After the second swipe, it illuminates

green. Again, no User Cancel card is needed.

You can actually use many types of credit cards and other ABA type cards to create your own User or Master Level cards. You are not limited to the User cards made for LearnLok. You do, however, have to use the User Cancel cards. The enrolling procedures would otherwise be the same, except that you would use one of your own cards as a User card. Master Level cards, even if created on a credit card, don't require User Cancel cards. Once you cancel a card, though, the User Cancel card can be

Penetration Party



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#PP - 1

used with a completely different User card the next time around. If you have employee ID cards or other magnetic stripe type cards that you are uncertain about, you can contact Ilco to verify that they will work with the system. Ilco does not accept liability for damage you may do to employee or other credit (or similar) cards that you turn into User cards.

Removing Cards from Memory

I earlier indicated that a specific User card can be cancelled by swiping its associated User Cancel card. When that is done, the indicator should flash green and red. If the card is later retrieved, it can be enrolled again with the same or a different User Cancel card. It could also be enrolled as a Master Level card, in which case no User Cancel card would be needed.

If a large number of individual user cards need to be cancelled, you have the option of canceling all currently programmed (non Master Level) User cards at one time. To do so, you must swipe the Learn (#2) card three times. The indicator would illuminate green, red, and then flash green then red after each swipe. Any User cards that you wish to use again must be re-enrolled. This has no effect on Master Level cards.

You cannot individually remove (or cancel) Master Level cards. All must be removed at the same time, and ones that you intend to reuse must be re-enrolled. To remove all Master Level cards, you must swipe the Master Level Cancel (#6) card one time. The indicator should flash green and red. This removes all Master Level cards, but has no effect on the standard User (non Master Level) cards.

Lockout Mode

The #3 card is the Lockout card. It allows you to temporarily lock out ALL cards except for the Emergency card. When in Lockout mode, all User and Master Level cards are denied access. You just swipe the Lockout card once, and the indicator flashes red. The lock is then in Lockout mode. If you swipe the Lockout card again, the indicator will flash green. That indicates that Lockout mode is removed and all previously programmed cards will work again.

Passage Mode

There are two ways to put a lock into Passage Mode. It can be done with either the Passage Mode card or

a Master Level 1 card. With the Passage Mode (#5) card, you swipe the card once, and the indicator should flash green. The lock will then be in Passage Mode. Even if you don't disable the Passage Mode with an appropriate card, it will automatically end after 9 hours, and return the lock to a locked mode. To cancel Passage Mode, you swipe the Passage Mode card again, and the indicator should flash red.

Using a Master Level 1 card, the process is a bit different. You swipe a Master Level 1 card once, and the indicator will flash for about six seconds. Do not turn the handle during that time. Within one minute (6 seconds for the Model 3 Card Reader), swipe the Master Level 1 card a second time. The indicator should flash green once. It will then be in passage mode.

You can cancel Passage Mode with the Passage Mode card using the procedure mentioned earlier for that card, or use a Master Level 1 card. The Master Level 1 card disables Passage Mode in nearly the same way as it enables Passage Mode. Swipe the Master Level 1 card once. The indicator will flash green for about six seconds. Again, do not turn the handle while the light is flashing. Within one minute (6 seconds for the Model 3 Card Reader) swipe the Master Level 1 card the second time. This time the indicator will flash red once. Passage Mode will be disabled.

Emergency Access

The Emergency Access (#4) card overrides all pre-programmed modes and deadbolts. Swipe the Emergency Access card once to gain access. The indicator flashes green. It cannot be locked out except by changing the facility code with a Start-up (#1) card from another Starter Pack. When in Lockout Mode, the Emergency Access card is the only card that will allow someone to gain access. The Lockout card, that puts a lock into Lockout mode, can take the lock out of Lockout mode. Doing that does not unlock the lock; it merely allows previously programmed keys to operate again.

Accessing Lock Audit Information


The Audit (#7) card is needed in order to download the lock audit trail. To do so requires the Solitaire 850L Audit Software, which will run on a

laptop computer. A special programming module is also required to download the audit. This might seem to defeat the purpose of choosing LearnLok, if the system was chosen specifically to avoid the need for computers entirely. If you can do virtually all programming and special functions without a computer, limited detail audit capability might boost the argument to do without audit and savor the simplicity of LearnLok. If auditing is really needed, it might be smarter to upgrade.

I have not yet tried it, but it is possible to upgrade a LearnLok version card access lock to something more sophisticated without replacing the entire lock. Not only that, but it is supposed to be done without even removing the existing lock from the door. The upgrade would disable the seven LearnLok programming cards, and switch the programming process to make computer software a fundamentally integral part. This more sophisticated system would allow User cards to work during specific hours and days of the week, giving much better access control. When I get the time to explore it more deeply, I will likely do a follow up article on upgrading the LearnLok based lock and the software and programming that coincides with it.

Final Thoughts

Although I still need to sort out a few details, I'm very impressed with the concept of LearnLok and its upgradeability. It allows otherwise computer shy locksmiths to provide their customers with electronic card access at a fairly reasonable cost. The customer gets an easy to use (and program) system that can be upgraded in the future without losing the investment in the original locks. The Solitaire 850L locks appear to be weather resistant with what seemed to be some kind of foam rubber seal on the exterior housing. I'm not sure if there are recommended procedures if locks get ice in the track where the cards are swiped (if that's a likely problem). I'm sure most of our customers would prefer to avoid lock damage while removing ice.

If you are interested in LearnLok contact one of your locksmith supply companies that stock the LearnLok line. Otherwise you can contact Ilco customer service at: (336) 725-1331. Circle 307 on Rapid Reply. 

BEGINNER'S CORNER

Master Lock Pro Series Padlocks



by
**Jim
Langston**



1. The Master ProSeries padlocks.

This month we'll cover the procedures for servicing the Master ProSeries padlocks. (See photograph 1.) The ProSeries features a hardened Boron alloy shackle, either a Xenoy thermoplastic cover or a solid metal shroud, is dual ball bearing

locking, flow through debris channels, lock cylinder featuring spool pins, rekeyable design and a laminated body. (See illustration A.)

The first thing to do to rekey the Pro Series is to open the lock and insert an Allen wrench and remove

the setscrew. (See photograph 2.) The setscrew secures the bottom cover plate in place. (See photograph 3.)

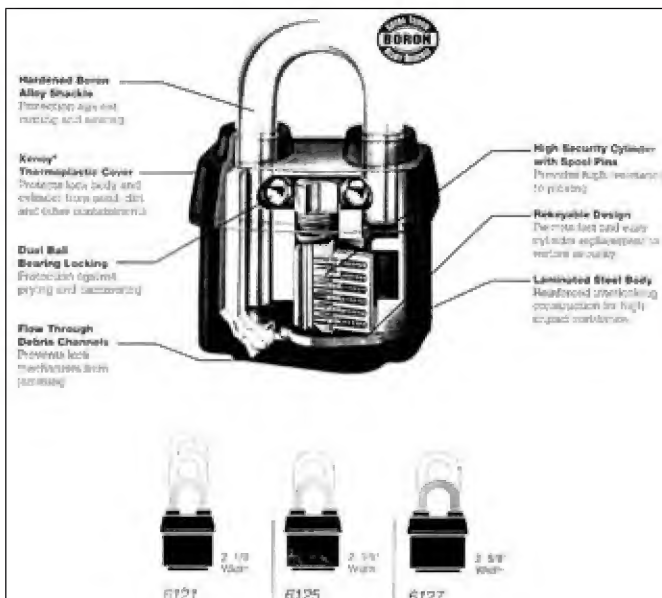
Once the cylinder is removed (see photograph 4), insert the key into the cylinder and turn it counter clockwise approximately 15 degrees and follow the cylinder straight out. (See photograph 5.)

Next you are ready to repin the cylinder to a new key. Insert a new key into the plug and repin the cylinder just as you would any other cylinder. (See photograph 6.)

You can always swap around the pins in the lock to rekey it if you do not have a Master Pin Kit available. Reverse the process to put the lock back together.

Here is an extra tip: If you do not have a Master following tool, you might try making one by cutting a notch out of a .357 caliber gun shell. (See photograph 7.) A .357 caliber gun shell fits almost perfectly. (See photograph 8.)

Master Lock makes a wide range of padlocks in all sizes and shapes. For



A. Master Pro Series components.



2. Insert an Allen wrench and remove the setscrew.



3. That setscrew secures the bottom cover plate.



4. Remove the cylinder.



5. Turn the cylinder and follow it straight out.




6. Insert a new key into the plug and repin.

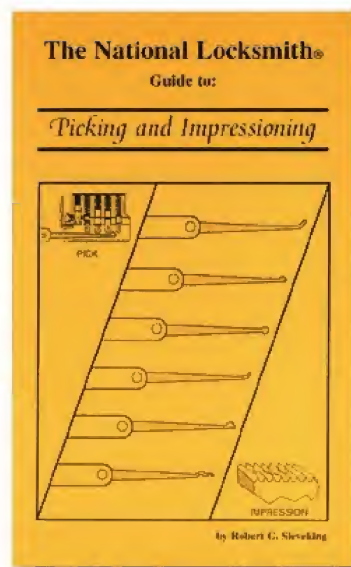


7. Cut a notch out of a .357 caliber gun shell.

more information on Master Lock products call: (414) 444-2800; Fax: (414) 444-0322. Circle RR# 311.

Point to Ponder: Get someone else to blow your horn and the sound will carry twice as far. 

Picking & Impressioning



Here is the most complete book ever published on picking and impressioning locks! You will have everything you need to know about how to open almost every kind of lock that can be picked.

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#P1



THE CASH STATION

by Mark Daniel

LeFebure TL15

Manufacturer
LeFebure

UL Rating
TL15

Safe Size
20" Wide, 22" High, 24" Deep.

Door Size
18" Wide, 20" High

Handle Type
L-Handle

Handle Rotation
Clockwise to open

Dial Center to Handle Center
4" right of dial center



Dial Location

Dial center is 6-3/4" down from top of door and 3-3/8" from opening side

Number of Door Locking Bolts
3

Door Locking Bolt Locations
3-1/2", 10", 16-1/2" down from top of door.

Door Locking Bolt Diameter
3/4"

Door Thickness to Bolt Center
2-5/8"

Door Thickness to Lock Case
2-1/8"

Door Thickness to Back of Lock
3-1/4"

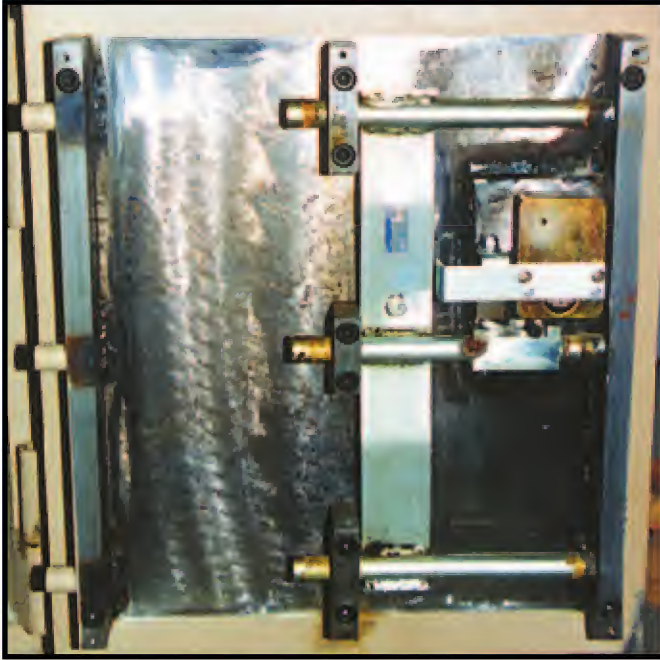
Combination Lock Type
LaGard 1800

Combination Lock Description
Three wheel, key-changeable lock.

Combination Lock Case Thickness
1-1/8"



November 2000 • 85



LeFebure TL15

Number of Wheels

3

Driver Location

Rear

Combination Lock Handing

Vertical Down (VD)

Drop-In Location

73

Forbidden Zone

0-20

Combination Lock Opening Procedures

4xL to first number.

3xR to second number.

2xL to third number.

1xR until dial stops.

Combination Lock Drill Point

7/8" from dial center at 72. Align wheel gates at lever fence.

Combination Lock Relock Trigger Type

Wire spring. Activates when combination lock cover is removed or punched.

Combination Lock Relock Trigger Drill Point

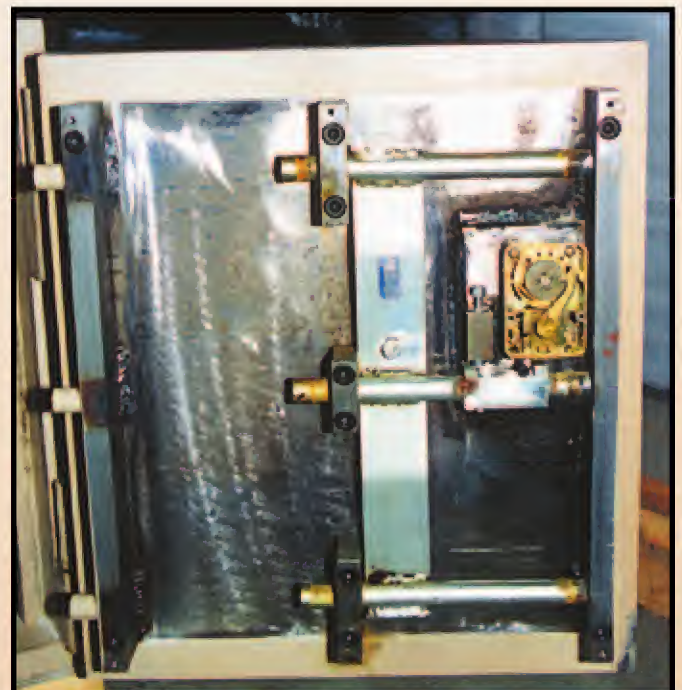
7/8" right of dial center, 1-5/8" down. Hook with a wire and pull towards front of safe.

External Relock Device Type

Spring loaded plunger.

External Relock Device Drill Point:

1-7/8" right of dial center, 2-3/4" down.



The WHITER Side

"Rules for Living"



by
**Sara
Probasco**

"What's that you're reading?" Don asked the other evening when he joined me in the den, following supertime.

"A list of rules for living the good life, with business in mind. Some of the points are really good. The author invited me to pass it on, so here." I handed the pages to Don. "I thought we might try adopting a few. After all, little things like that can change your life, and you could certainly stand a few changes." I ducked and giggled as he took a playful swing in my general direction.

With a scowl of skepticism, Don rustled the pages as he began to read the following:

1. Give your customers more than they expect. Cheerfully.

"Ha!" he said at that one.

2. Don't believe all you hear, and only half of what you see.

"Hmpff! I'm getting to where I can't see and hear half of what goes on, anyhow, so where does that leave me?" Don grumbled more to himself than to me.

3. Don't spend all you have.
4. Don't sleep all you want - especially on the job.

"Hey, did you write these, or what?" No doubt, he was remembering the other afternoon when I caught him napping between service calls in his high-backed leather desk chair at the store.

"Just read the list," I responded. He continued.

5. Never laugh at anyone's dreams.
6. Care deeply and passionately about what you do. Even if you get hurt, it's the only way to live life completely.
7. In disagreements, fight fairly; no name calling.
8. Don't judge people by their relatives.

"Now, that's a tough one!" Don said with a laugh.

9. Talk slowly, but think quickly.
 10. When someone asks you a question you don't want to answer, smile sweetly and ask, "Why do you want to know?"
 11. Remember, great love and great achievements involve great risk.
 12. Phone your mom (or dad) often - especially when things are going well for you.
 13. Say "God bless you" when you hear someone sneeze.
 14. When you lose, don't lose the lesson.
 15. Remember the three R's:
Respect for self;
Respect for others;
Responsibility for all your actions.
 16. Don't let a little dispute or misunderstanding injure a great friendship or business relationship.
 17. When you realize you've made a mistake, admit it. Then take immediate steps to correct it.
 18. When you say "I'm sorry" look the person in the eye and mean it with all your heart.
 19. Never withhold forgiveness from someone who sincerely asks you for it.
 20. Smile when you pick up the phone. The caller will hear it in your voice.
 21. Spend some time alone every week.
- "I want you to tell me just exactly how I can manage to do that, and I'll be happy to," Don said, pointing to number twenty-one.
- "Be patient. You'll find a way, once you get another service guy trained," I assured him with a smile.
22. Welcome change, but don't turn loose of your values.
 23. Remember, silence is sometimes the best answer.

"I've been telling you that for years, but you wouldn't believe me," he pointed out.

24. In all things, be honorable. That way, when you think back later, you'll be able to enjoy it all over again.
25. Trust in God, but lock your car.
26. Do everything you can to create a tranquil, harmonious atmosphere in your work place.
27. When disagreements do occur, stick to the subject, and don't bring up the past.
28. Don't say "never" or "always" when debating an issue.
29. Read between the lines.
30. Listen between the words.
31. Share your knowledge with someone else. It's a way to achieve immortality.
32. Pray. There's immeasurable power in it.
33. Never interrupt someone when they're paying you a compliment.
34. Mind your own business.
35. Once a year, go someplace you've never been before.

"In this country, I do that nearly every day," Don muttered.

36. If you make a lot of money, put some of it to use helping others.
37. Remember that not getting what you want is sometimes a stroke of luck.
38. Learn the boundaries, then reach beyond them.
39. Build relationships where you care about one another more than you need one another.
40. Judge your success by what you had to give up in order to get it.

41. Reputation is who others think you are. Character is who you are when nobody is looking.

42. Your character is your destiny.

43. Approach love, work, and cooking with equal, reckless abandon.

"Pretty good," Don said as he finished reading. He reached for a stack of papers on his desk, riffled through them to find the one he was after, and handed it to me. "But I like my own list better."

I read the following aloud. We chuckled at this one and that as I went along.

1. Don't quit looking for work just because you've found a job.
2. If you can't repair the brakes, get a louder horn.
3. If at first you don't succeed, destroy all evidence that you tried.
4. When everything seems to be coming your way, you're probably in the wrong lane.
5. Hard work will pay off in the future. Laziness pays off now.
6. If you always tell the truth, you don't need a good memory.
7. No one is ever watching when you do it right!
8. Success occurs in private; failure, in full view.
9. If you must choose between two evils, pick the one you've never tried before
10. Eagles may soar, but weasels don't get sucked into jet engines.
11. Bills travel through the mail at twice the speed of checks.
12. Borrow money from pessimists. They don't expect to get it back.

Finally, Don pointed to the last saying on the list with a smug look. "And next time you think about sleeping late in the morning, I want you to think about old faithful, number thirteen: The early bird gets the worm."

"Yeah, yeah, yeah!"
I said. "But it's the
second rat that gets
the cheese!"

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Don't Treadlock on Me



by
Dale W. Libby, CMS

the safe technician. The Treadlock Gun Safe Company (owned by the Tread Corporation) is one such notable business in the gun safe manufacturing industry. If you want some help working on one of their units and some southern hospitality, call (800) 729-8732 ex. 200. They were very helpful to me.

The patient in question was a Model 90 Classic Long Gun container. (See *photograph 1*.) The unit was about 5 feet high, 2-1/2 feet wide and about 3 feet deep. The opening handle was on the left side of the door and was a three handled spoke type arrangement. The S&G 6730 series Group II lock was located about 1 foot above the handle, also on the left side of the safe (the opening side). The 'call' was that the safe would not open.

Most times, this indicates a malfunction of the combination lock. Rather than interrogate the customer, I went to the job prepared for anything and everything. As in some cases, the repair took much longer than the opening and was harder to accomplish.

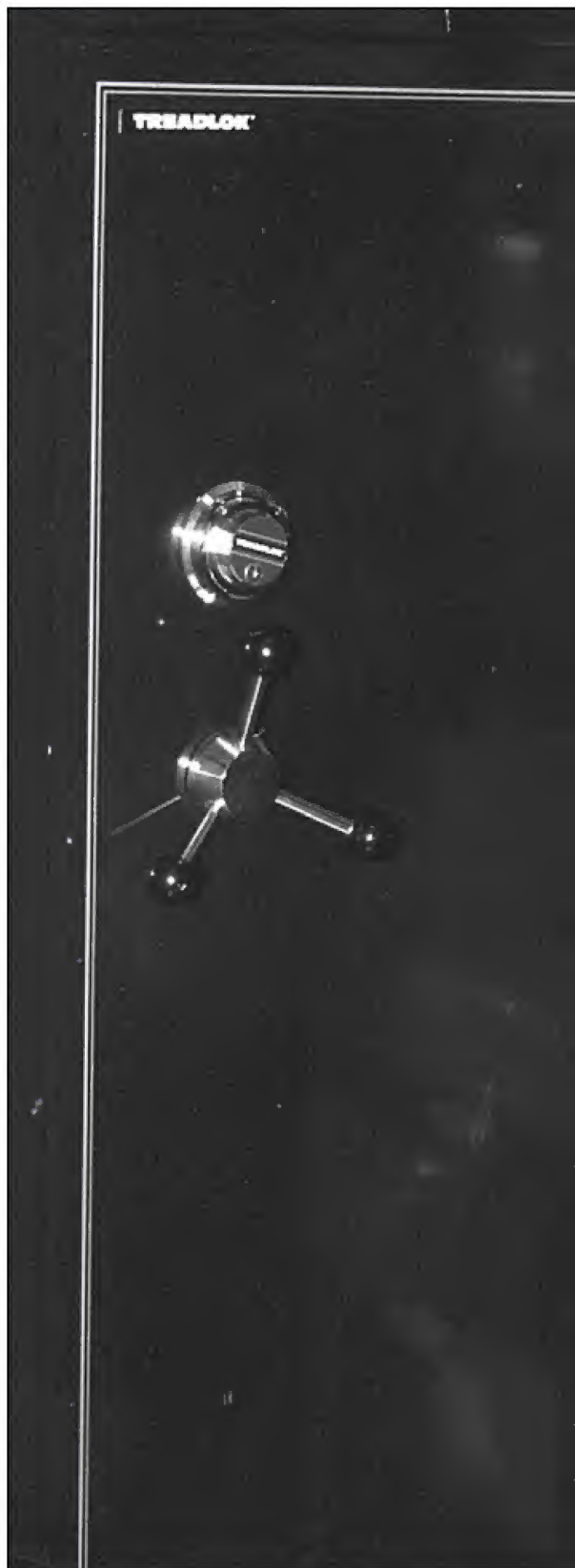
This safe incorporates a rack and pinion arrangement for raising the steel bolt channel inside the outer welded channel to open the door. When the opening handle is turned,

I find it refreshing when I encounter a gun safe manufacturer that is actually willing to help the customer and

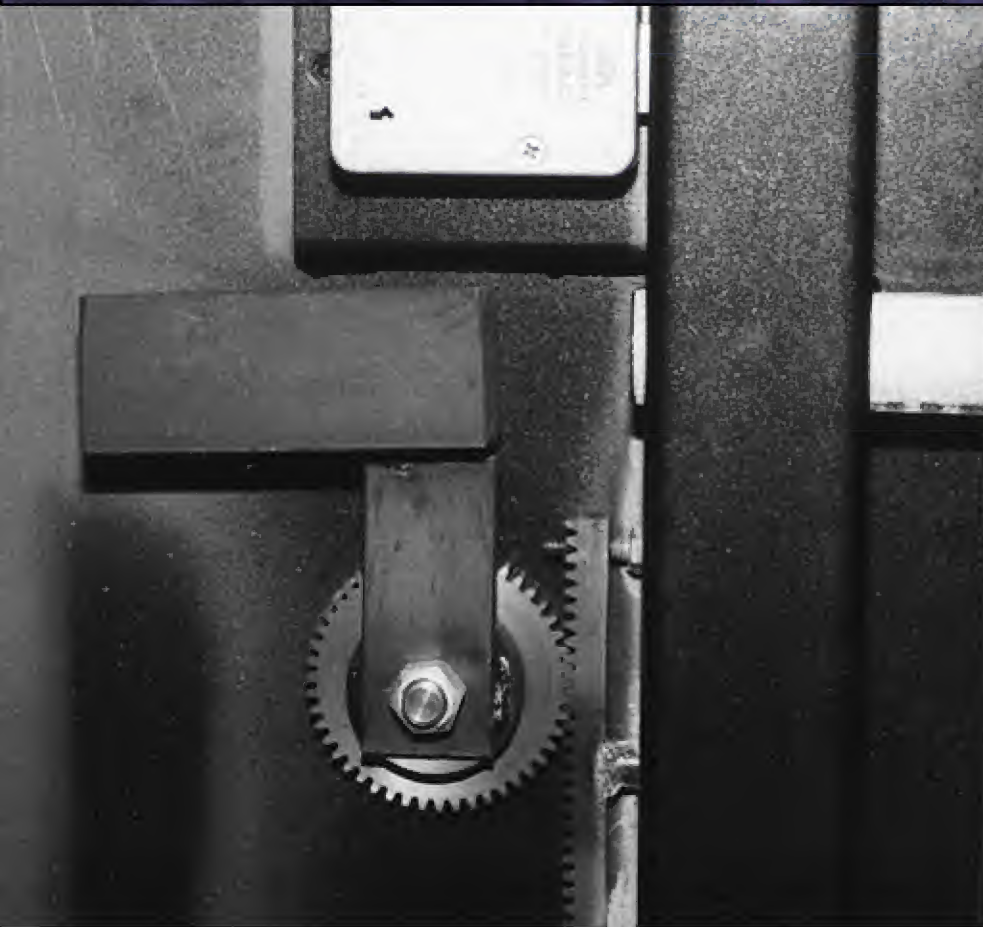
a large gear moves the lever up, which when working correctly, raises the inner channel with the angled bolt tracks in it. When the gear is turned, a large counterweight helps move the bolts. (See *photograph 2*.) When the inner channel rises, it forces the 5 large rectangular bolts into the door allowing the door to be opened.

The opening operation is simple and straight forward. The combination lock is mounted so close to the left opening edge of the door, that it is quite apparent that the lock bolt also enters the channel to block its movement when the lock bolt is extended. What could possibly go wrong? Not much actually.

The first thing I did was to move the handle. It turned about 360 degrees before coming to a hard stop in either direction. I looked in the McOmie Gun Safe Book for a picture of the inside of the unit. Knowing that the handle had positive stop



1. A Treadlock Model 90 Classic Long Gun container.



2. A large counterweight helps move the bolts.

positions made me believe that the gear and rack were operating correctly. Actually, the handle was turning too far in either direction and the gear was being stopped by the two rack alignment pins and not the bolt riser pin. I now locked the combination lock and tried turning the tri-spoke handle and it again worked flawlessly. This meant that something in the opening sequence of the handle was broken and that the combination lock had nothing to do with the safe not opening.

Apparently, this must be a common problem with older safes that experience heavy usage. Treadlock sent the owner a blueprint of the safe door as seen from the inside. All measurements were marked clearly. The perspective was from the inside of the door. It showed the position of the five locking bolts and the precise location point to drill to open. The prints also included a note that indicated they would help the locksmith with the opening if he or she needed encouragement in the opening.

The measurement for the 1/4 to 3/8-inch hole was 2-1/2 inches in from the edge of the door (opening side) and about 8 inches from the bottom



Guide to Motorcycles

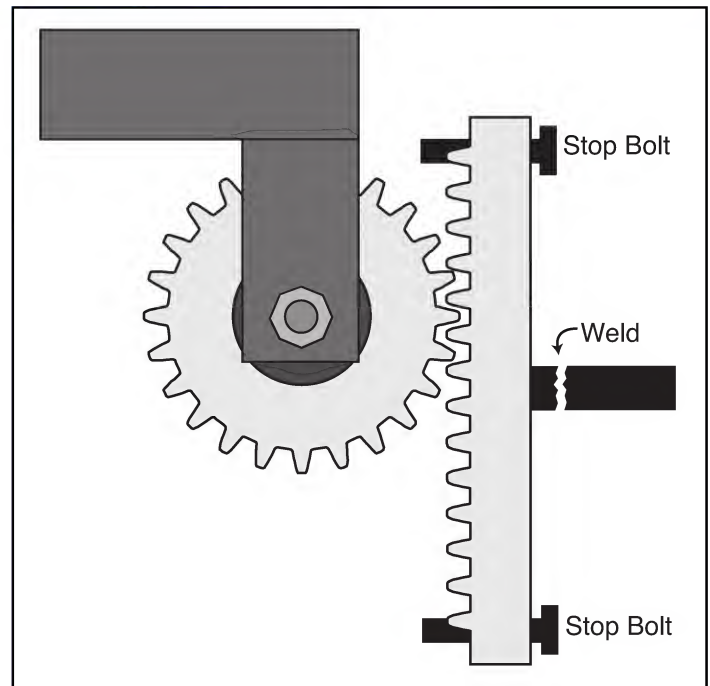
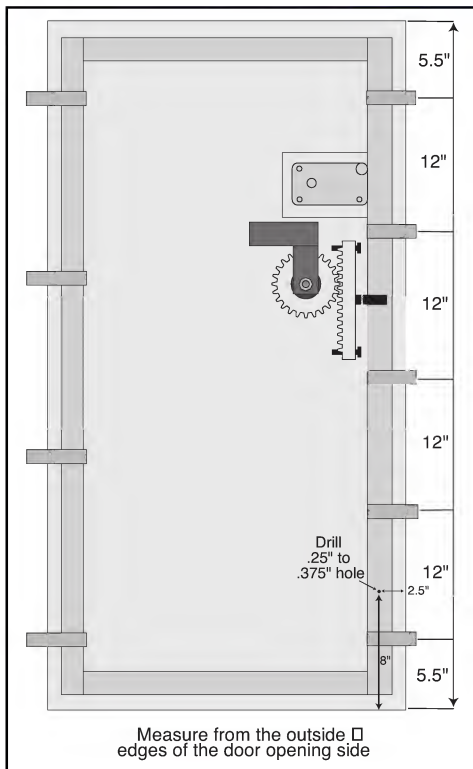
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#MOT - 2

A. Drill 2-1/2 inches in from the edge of the door and about 8-inches from the bottom edge of the door.



B. This pin does the actual raising and lowering of the bolt bar.

edge of the door. (See illustration A.) This hole was positioned over the inner channel inside the outside channel. The steel was 1/2 inch thick and soft. I drilled a 5/16-inch hole through the outside of the door, and it worked fine. The inner moveable channel now could be raised with an ice pick to withdraw the five locking bolts. The first thing I did was to work the combination lock and withdraw the locking bolt from the inner channel. The door was now unlocked.

This was a large door and the sequence to open was: raise the inner channel and then pull out on the door to hold the bolts and the channel in place. With the door pulled out, push in the ice pick and raise the channel again. It took me three tries before the door opened. Opening time after the hole was drilled, about 1 minute. Total time for the opening, about 5-minutes.

After removing the large back plate held on with 3/8-inch cap screws, the inner door was exposed. There were no relock devices on the door. The single relock trigger in the combination lock sufficed. I was able to reach into the door and pull out the rack next to the large gear. In the channel for the inner locking bar rested the other part of the rack. This pin was welded onto the geared rack and did the actual raising and lowering of the bolt bar to withdraw and extend the bolts when the

opening handle was turned. The weld or braze was broken. (See illustration B.) It could have happened from trying to force the door open when locked, or just over the many years of heavy usage this safe received. There was a locating pin inside the broken pin for correct alignment with the geared flat piece of steel.

My customer immediately took the broken pieces to his shop and brazed the pieces together. He was an accomplished welder and the repair took no time at all. It was as good as, if not better than, new. Now, all we had to do was to reinstall the gear with the pin against the large gear and the job would be over. To do that, the large gear and counterweight must be removed from the handle spindle.

First, we (the customer wanted to be of help) removed the large nut on the end of the spindle and tapped the end of the spindle with a piece of Oak and a sledgehammer. It moved about 1/8-inch and stopped. The gear was still tight to the spindle, but now the handle and the inner counterweight turned quite freely. In fact, it moved too freely. The purpose of the counterweight is to make the opening easier and keep the bolts in the retracted position when the door is open.

I correctly surmised that the gear and counterweight (all one single unit) was somehow pinned to the

handle spindle. I looked closely under the counterweight next to the large gear teeth and saw the end of a pin. Sure enough, there was also the end of the same pin beneath, and on the bottom of the geared unit 180 degrees opposite. Rather than try to somehow pound the pin out, (remember I had already bent the pin somewhat by trying to pound the spindle out of the gear earlier) I opted for a more progressive methodology.

I grabbed the outside handle and with the counterweight against the outside welded bolt channel, I turned the handle counter clockwise and with a yell of defiance, I twisted the handle until the pin sheared. The unit finally came apart. There was a large plastic anti-friction washer under the gear mechanism and under the outside handle.

The broken alignment pin in the spindle was easy to tap out. The broken pin on either side of the gear below the counterweight, was something else. The hole was drilled so that a standard punch would not work under the counterweight. The angle was incorrect. We opted to pound the pin into the center opening and drill it off. We did this twice for both sides of the hole before the old pin was completely removed. The pin was soft steel, so it was not a great obstacle.

The reassembly was quite easy. On the rack slide there are two hex head



3. The position of the counterweight must be at the top when the safe is locked.

bolts tapped into the ends of the slide. These are there to provide positive correct alignment of the rack against the inside channel of the door and of the large gear against the rack and to keep the large gear from turning too far and possibly disengaging the rack.

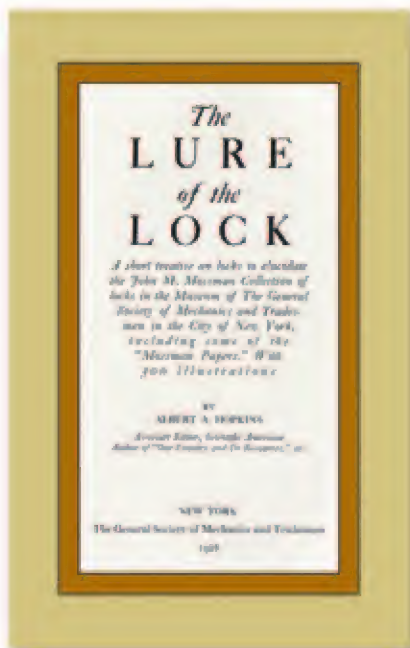
A simple arrangement that works well. The handle was aligned with a piece of 1/8-inch welding rod. The ends are bent at a 90-degree angle. When working correctly, the travel of the gear is maintained by the movement of the inside channel, thus putting all

stress on this single pin when opening and closing the door.

It is important to note the position of the counterweight. It must be at the top of the door gear when the safe is locked. (See photograph 3.) This avoids bolt end pressure on the edge of the combination lock bolt when the unit is locked.

The handle and opening mechanism now worked fine. Only one thing left to do. I took hold of the combination lock body and tried to move the lock. It shook quite freely. The customer did not want to divulge the combination to the safe and I said that was all right, but that the combination lock body would have to be tightened. I took off the back of the S&G combination lock and removed the 4 corner screws (one at a time) and used Loc-Tite sparingly. The lock was mounted on a large piece of hard plate that protected the combination lock and immediate area from drilling.

The reason that I called the Customer Service Rep. was to inquire about the gear mechanism and how it was fastened to the handle spindle. They were a great help. So, open and repair Gun Safes and Prosper! **TNL**



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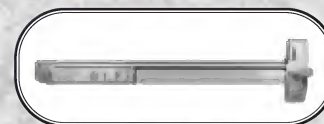
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11th Prize

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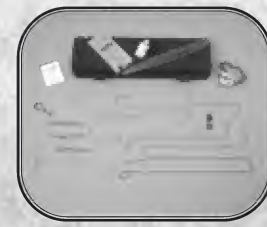
13th Prize

Sargent & Greenleaf 6120
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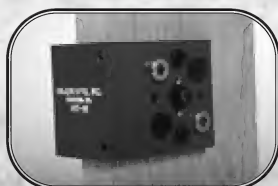
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17th Prize

Major Manufacturing's
HIT-111 Drill Guide



18th Prize

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19th Prize

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20th Prize

Baxter JV-1 & JV-5
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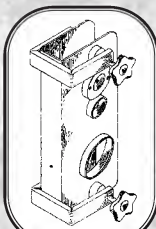
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22nd Prize

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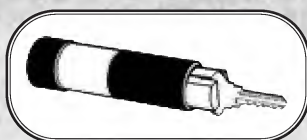
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Tips Start
on Next Page



**BWD KWIKIT WINNER:
Nissan Trunk Lock**

A 1995 Infinity I30 was brought in with a non-functioning trunk release, and like many Nissan trunk locks, this one had corroded from lack of key use. After trying the back seat and finding the trunk stuffed with luggage, I knew I would have to deal with the lock. When several saturations with WD-40™ and picking did not free the wafers, I became somewhat concerned since I didn't have a replacement lock, which meant drilling was not an option.

Having dealt with other "frozen" Nissan trunk locks in the past, I decided to remove the face cap (I have a replacement face cap assortment). I was hoping I would find that there was enough room - as with other Nissan trunk cylinders - between the housing and the plug to squeeze a pick in and push the upper and lower wafers back into the plug forming a shearline. (See illustration 1.) Then, I inserted the key and used the pick to force the wafers down to the shearline, turned the key and opened the trunk.

**Insert pick sideways
one side at a time.**

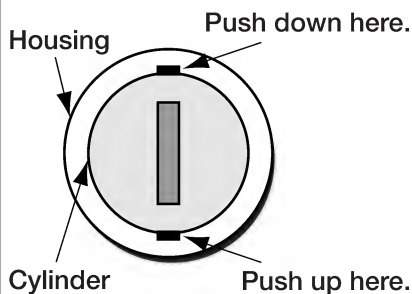


Illustration 1.

After opening the trunk and removing the cylinder, it was simply a matter of manipulating the wafers until they worked freely, reassembling the cylinder, installing a new face cap and reinstalling the lock. *David Craig Illinois*



**WEDGECO™ KEY
EXTRACTOR WINNER:
Split Seam Door Fix**

A customer requested that a key-in-knob be replaced with a leverset and a deadbolt be installed. This was no problem, until I got to the job and realized that the door jamb was concrete filled and the metal door had a split seam. I also found that the door

Jake's Jabber...

The old adage about time flying when you're having fun has never seemed truer to me than during this past year. It seems that New Year's day got here and the next thing I know it's November!

I mean, as fast as this year has gone, I must've been having a whole lot of fun! I know it was a busy year. It was also a year when I saw more locksmiths than ever before submit tips to this column. Not only by mail, but also over the Internet, and in the TNL forums.

The tipsters who've had their tips published have won some great prizes and they all qualify for the year-end drawing, which I get to do next month. I'll publish the results of that drawing in the January 2001 issue.

It hardly seems possible that Turkey Day is just around the corner and Christmas is hard on its heels. Regardless of how fast this year's speeding by I want to thank those for their contributions, the prize contributors for their support and the staff at TNL. As a group you make this column possible and my job much easier.

So, as the old radio preacher used to say: "Keep them cards and letters coming folks!" I hope y'all have had as much fun this past year as I've had.

See y'all next month.



**by Jake
Jakubowski**

was only 1-3/8", which would not allow me to use my Squeeze Play to mortise the door edge for the deadbolt!

Since the door and the jamb fit very tightly, the only way to install the deadbolt latch was to mortise the edge of the door so the door can close without the faceplate of the deadbolt latch hanging up on the jamb, or find another way to mount the deadbolt.

Unfortunately, before I considered the consequences, I had already cut my preps for the deadbolt and I'm stuck with a 1" edge bore and a 2-3/4" backset crossbore, and seemingly, no way to mortise for the deadbolt.

To solve the problem, I marked the faceplate screw holes on the edge of the door and drilled a hole for each screw. Then I countersunk the holes so that the mounting screws would be flush with the door's edge and installed the deadbolt latch, with the faceplate on the inside of the door edge with screws and Speed-Nuts™. (See illustration 2.)



Illustration 2.

(You can find Speed-Nuts™ in almost any automotive supply store).

Although the cross bore centerline was off by about 3/16", the deadbolt lined up well enough to prevent any binding of the tailpiece on the single cylinder deadbolt that I installed.

As far as the concrete filled jamb was concerned, I cut the hole with a bi-metal hole saw, trimmed it out with my Dremel Tool and cut the concrete behind the jamb with my trusty Milwaukee Hammer Drill.

*Raymond Moreno, Jr.
California*

Editor's Note: Major manufacturing makes the LMB series (Lock Mounting Brackets) and the LMB 01 would have been ideal for your installation. Thanks for the tip.



**STRATTEC RACING
JACKET WINNER:
Lori Installation
Formula**

I often install Lori 4500 series deadbolts on doors that are not standard thickness' (1-3/8" or 1-3/4"). I have a formula to determine the length of the cylinders to be used for virtually any door thickness when installing these locks.

There are two ways of mounting the cylinders in Lori locks - flush

mounted or recessed. For example: 15/16" cylinders would be recess mounted on a 1-3/4" door, or flush mounted by using spacer rings on a 1-3/8" door.

First, measure the door thickness and round off to the closest sixteenth of an inch. Then divide by two. Next, add 1/16" to allow for a wave washer with each cylinder. The result will be the cylinder length needed for recess mounted cylinders. Add 3/16" to this number to get the cylinder length for flush mounted cylinders. This is the cylinder length range for the door. You can use any length cylinder within this length range, assuming you have the correct spacer rings.

For example: suppose you have a 1-7/8" thick door. 1-7/8" divided by two is 15/16". Add 1/16" for the wave washer and you get 1". Therefore, you can recess mount 1" cylinders without using spacer rings. Add 3/16" to get the flush mount cylinder length, which is 1-3/16". Since you are unlikely to have 1-3/16" cylinders, you can probably forget about flush mounted cylinders for this door. However, 1-1/8" cylinders are within the cylinder length range for this door (1" to 1-3/16").

To determine the correct size spacer ring, subtract the minimum cylinder length, which in this case is 1", from the length of the cylinder you are using. So, if you want to, you can use 1-1/8" cylinders (1-1/8" minus 1" = 1/8") this means you will use 1/8" spacer rings to get the correct fit.

Recently, I installed a Lori on a 2-3/16" thick door. 2-3/16" divided by two is 1-3/32" plus 1/16" = 1-5/32". Adding 3/16" to 1-5/32" gave me 1-11/32". This made the cylinder length range for this door 1-5/32" to 1-11/32". A 1-1/4" cylinder is - when you convert the fractions - 1-8/32" long. I subtracted 1-5/32" (the upper limit of my cylinder range) from 1-8/32" which left 3/32". So, I used a 3/32" spacer ring with each cylinder for a perfect fit.

Note: The spacer rings furnished with the lock for flush mounted cylinders are actually 5/32", but for a snugger fit you can substitute 3/16" spacer rings if you have them. Additional note: There are six 1/32" increments of spacer rings that may be called for by the formula (1/32", 1/16", 3/32", 1/8", 5/32" & 3/16").

Here is what you do if you do not have the correct spacer: 1/32"- Not available. Use an extra wave washer, if needed; 1/16". Marks part number #9277; is 3/32". Ilco part number for is #861C-28-10 (for 3/32"). Major Manufacturing's #CCA-332 is also 3/32". If you need a 1/8" spacer, substitute two 1/16" spacers. Two 5/32" spacers come with the lock. If you need a 3/16" spacer, substitute two 3/32" spacers.

Here are the decimal conversions, so you can use a micrometer to determine spacer ring thickness: 1/32" = .031. 1/16" = .063. 3/32" =

.094. 1/8" = .125. 5/32" = .156. 3/16" = .188.

*Guy Parr
Maryland*



**HPC AIR WEDGE™
WINNER:
Dust Cover Trick**

When servicing door locks on imported cars, I use to have a real problem with the shutter and dust cover. I would be very careful not to let them pop out, but occasionally they would. Then the cussing and fussing would start. Here's how I solved that frustrating problem.

I now put grease in the hole where the spring goes. That holds the spring

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#TNL - CD1

in place. I also put some grease on the back side of the dust cover, then press the shutter into that grease (it doesn't take much grease). The grease holds the spring and dust shutter in place while you reassemble the cylinder.

*Ed Hamm
Illinois*



**SARGENT &
GREENLEAF 4400
SERIES SAFE DEPOSIT
BOX LOCK WINNER:
Fore!**

Over the years I've responded to numerous calls where the customer complains that their door is not

latching properly. Either the door has sagged, warped, swollen, or the strike plate has been knocked out of alignment.

Frequently the fix is simply moving the strike plate up/down, forward or back a sixteenth of an inch or so. The problem is that the small amount of adjustment often puts the new screw hole so close to the old hole that when you try to set the screw, it veers off into the old hole.

I get around this problem by using wooden golf tees. As shown in *illustration 3*, I just drive a tee in each

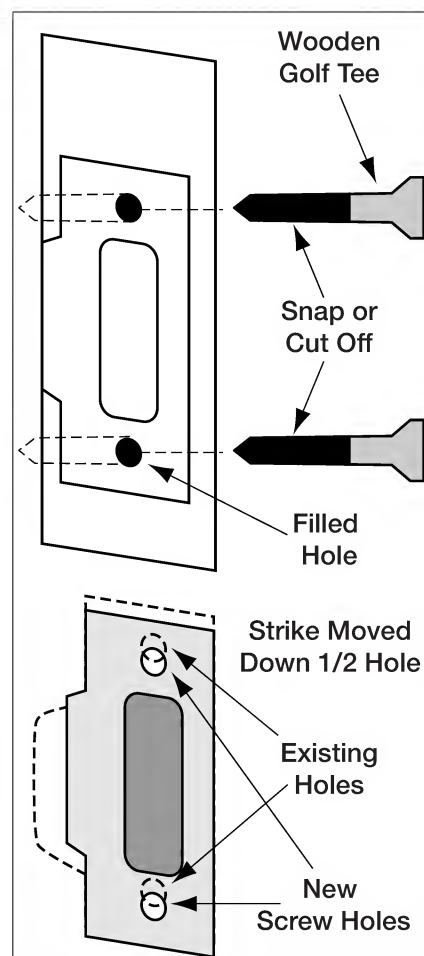
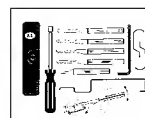


Illustration 3.

screw hole, cut them off flush and reinsert the screw for a tight, lasting repair. The tees are cheap and work well on strike preps, latch preps, hinges or anywhere a hole has been wallowed out in wood.

*Will Hudson, RST
Virginia*



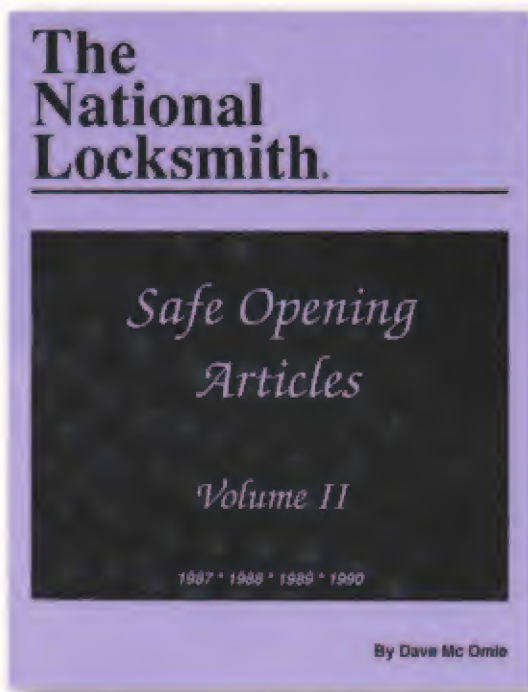
**A-1 SECURITY
PRODUCTS WINNER:
Cylinder Retainer
Cap Tip**

Often when you remove the spring retainer - especially the cap type - from many cylinders, it is difficult to replace them where they will hold tightly when reinstalled.



Illustration 4.

Safe Opening Articles



Dave McOmie's original articles from
when he first started writing for
The National Locksmith are
reprinted in this book.

CLICK HERE TO LEARN MORE



#SA - 2

I have found that the use of a pair of wire strippers (*see Illustration 4*) can be used to crimp these retainers so that they effectively and securely retain the springs and pins.

Simply straddle each end of the spring retainer with the wire strippers and squeeze the handles. This puts a dimple in both sides of the retainer and if done at three points along the length of the retainer, allows the retainer to hold very securely.

I use Ideal Industries (Model #45-125) wire strippers, but I feel certain any of the other brands will work just as well.

*Wade Bovender
North Carolina*



ILCO KEY BLANKS
(100 BLANKS)
WINNER:
Screw Sizing Trick

It's not uncommon for me to have the right sized screw for the application I need, but find that the head is too big for the job.

When I encounter this problem, I simply chuck the threads of the screw into my drill turn the drill on slow speed and use a file to modify the screw head to the shape and size appropriate for the job. (*See illustration 5.*)



(Remember to wear safety goggles.)

Illustration 5.

You can also use Vise-Grips™ and a Dremel tool if you want.

*Joseph Sicari
New York*



KEEDEKX "SPIN OUT"
SCREWDRIVER WINNER:
Great Adjustable Plug Holder

I bought an inexpensive tubing cutter at a local hardware store and modified it to make a really great adjustable plug/cylinder holder. I removed the cutter blade and cut back on the end where the cutter was located. (*See illustration 6.*)

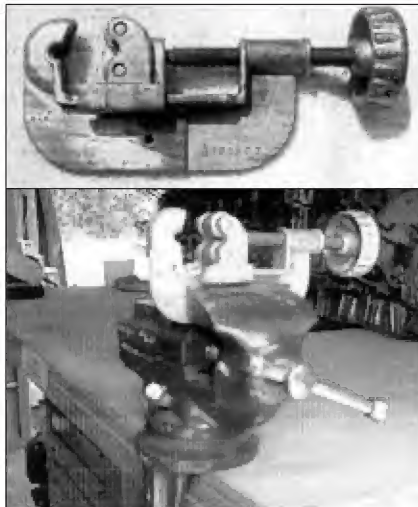


Illustration 6.

As you can see in the illustration, I can mount this holder in my bench vise to work on plugs, mortise cylinders and even cylindrical entry locks that I want to pick. I use it almost daily for pinning, shiming and picking of a wide variety of plugs and cylinders.

Sam Cain

North Carolina



TECH TRAIN TRAINING
VIDEO WINNER:
Master Key Keeper

The dorm building of a college that I service has eight floors and is grand master keyed with each floor having a floor master. The director of security wanted a means of keeping tight

Modern Safe Opening



This book is a step-by-step How-To course in safe penetration. Opening safes is one of the most profitable aspects of the locksmithing business.

CLICK HERE TO LEARN MORE



#MSO - 1

control over the floor masters, but still have them available to the floor monitors in the event of an emergency or lockout.

What I did was design a way to trap each floor master and when a floor monitor used their room key to remove a floor master, my device would trap their room key.

I used a flush mounted electric panel and drilled nine holes in it to accept mortise cylinders. As can be seen in *illustration 7*, the center cylinder has a large round cam attached to it with a gate cut in one position on the cam. The other eight cylinders are evenly placed around the large cam. Each of the eight cylinders represents one floor and contains a floor master.

On each of these eight cylinders, I inverted the tailpiece so that when the tailpiece is in the "normal" position as shown in the illustration, the plug is turned upside down in the cylinder and the floor master cannot be removed.

The center cylinder is keyed to the grand master and the eight floor monitor room keys. To access a floor master, a monitor inserts a key in the center cylinder, turns the cylinder (which rotates the cam) until the gate lines up under the floor master cylinder of choice. The floor master cylinder is then turned 180°, which allows the tailpiece to be turned into the gate in the cam. This also rotates the plug 180° allowing the floor master to be removed.

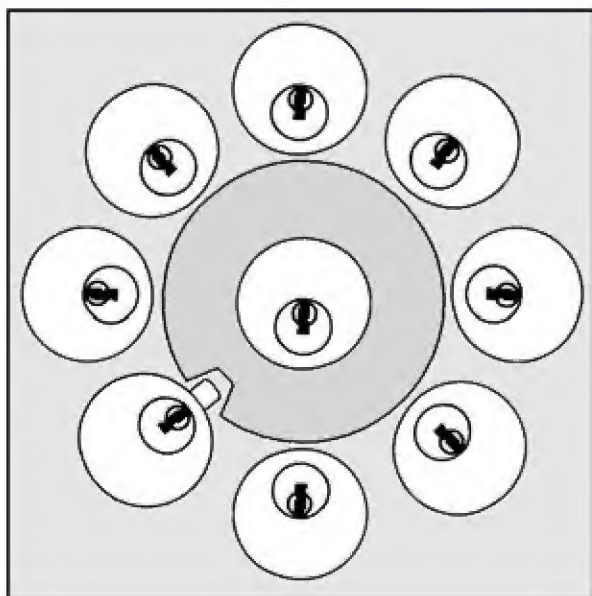


Illustration 7.

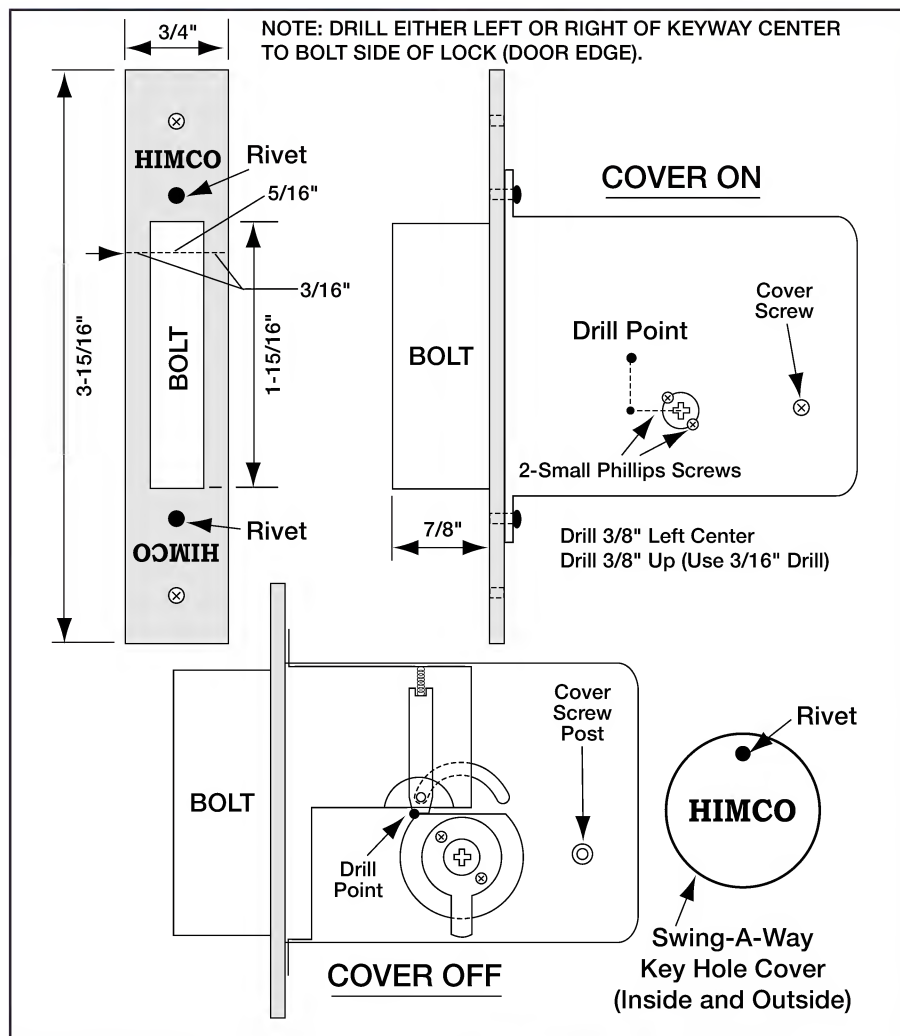


Illustration 8.

Since the monitor's key is now in the center cylinder, it cannot be removed because the shearline of that cylinder is out of alignment and maintained out of position by the floor master cylinder cam, trapping the monitor's room key.

All keys are numbered and recorded and if a master is removed and not replaced, security knows immediately which floor monitor removed the master.

This system has worked out very well.

*Kelly Johnson
Florida*



**SIEVEKING
PRODUCTS GM E-Z
WHEEL PULLER
WINNER:
Blood Pressure Cuff
Trick**

I bought a blood pressure monitor at a yard sale for \$1.00!

As soon as I got home, I used it on my wife's car to see if it would work as well as some of the new air jacks that are being sold to spread doors for opening tools.

It worked like a champ on my wife's car and I then went to a friend's house and tried it on his car. It worked equally as well.

So, my tip is obvious. The next time you're at the flea market or a yard sale and see a used blood pressure monitor, it could be an economical addition to your car opening tools.

*Richard Imes
Maryland*

Major MAJOR
MANUFACTURING, INC. MANUFACTURING
PRODUCTS WINNER:
Himco Deadbolt Bypass

A Realtor called me needing keys

for a house they had listed. When I got to the property, I found that each door had one profile cylinder, one lever set and one Himco deadbolt with a 4-way key, for which I could not make a key. All the locks were locked.

I called the agent and said I would have to drill the Himco locks and could not make keys for them. They gave me permission to drill the locks out. It took me about thirty minutes of drilling and probing before I got the first Himco opened. Once I had the deadbolt out of the door, I removed the cover plate and found a drill point that would allow me to remove the other three Himco locks in just a few minutes.

Illustration 8, shows the drill point, which is 3/8" left or right -depending on the position of the keyway. Drill a 3/16" hole and use an ice pick, or an awl, to lift the spring-loaded detent and then probe the bolt back.

This drill point will allow the swinging cover plate to cover the hole that is drilled. If you run across one of these locks, you will find the key cover on both the inside and the outside of the door.

*Jim Curtis
California*



THE SIEVEKING AUTO KEY GUIDE WINNER: En Garde!

At a wedding reception, I was asked to open a locked 2000 Dodge Neon. Not having any tools with me, I hit upon the following idea.

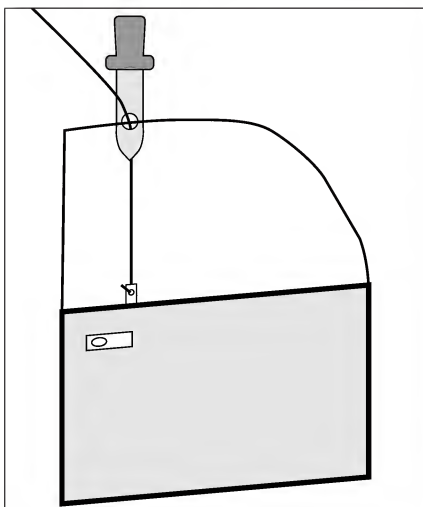


Illustration 9.

Using a cloth table napkin, I wedged the glass outward. Then I took my grandson's plastic bubble-type sword and wedged it in the opening. The sword has several holes in the plastic blade.

I removed the CB antenna from my son's Dodge pick-up, bent a hook at the end of it. (See *illustration 9*.) I slid the antenna down through holes in the blade, hooked the button and opened the door!

I used the sword to keep from hitting the wedged and consequently stressed glass with the steel antenna, which could have caused the glass to shatter.

*Jack Hole
New York*

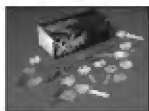


SLIDELOCK'S "Z" TOOL OPENING SET WINNER: Semi Opening Tips

I was called to open a 2000, Kenworth T2000. It turned out that this truck is equipped with a vertical linkage similar to many Ford vehicles. The kind with the round black pop up button. As with Fords, I used an upside down hook tool to lift that part of the linkage. I inserted the tool near the button, dropped the hook below the window and turned it inward to contact the linkage. Now I slid the tool down the vertical linkage until I could hook it under the horizontal/diagonal linkage and lifted. The door was unlocked.

I opened a 1997 Freightliner that was also interesting. The inside lock control was a large, yellow rectangular shaped button that lifts up to open on the side of the door panel. Using a probe light, I found no linkages in the door, but did notice a yellow colored object in line with the inside lock button. I pulled up on it and the door unlocked.

*Adrian Slater
Virginia*



JET KEY BLANKS (100 BLANKS) WINNER: Open, Sesame!

Here's how I opened and decoded a Sesame padlock with no damage, in just a few minutes.

The lock is held together with a pin. I use a #50 drill to drill just a short distance into this pin and then ran a 2-56 tap into the hole to be able to screw in a 2-56 screw. Then I clamp the screw head in my vise and gently pried the lock mechanism away from the body. This pulls the pin out without any damage to the lock body.

Once I have the mechanism out, I decode it and reinsert the mechanism in the lock body. I use a new pin to secure it and often just turn the old pin upside down and drive it back in the hole.

This only takes a few minutes and no one can tell that the lock has been taken apart.

*Robert A. Miller
Montana*



HIGH TECH TOOLS WINNER: U-Haul Trailer Locks

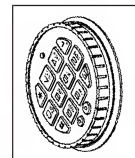
U-Haul sells two types of trailer hitch locks to their customers. One version is the short trailer lock, and the other is the long trailer lock.

The short trailer lock uses a Y-11 blank and you can cut the key using HPC's 1200CMB card #29 for spacing and depth. The long trailer lock uses the same card, spacing and depth but uses the 100AM or AP5 blank.

Both of these locks are wafer locks and will pick very easily if they are not jammed too tightly on the hitch. Just insert your tension wrench to hold the dust cover back and pick the cylinders in a counter-clockwise direction. If the lock is really tight on the hitch and there is no play in the shackle, it takes longer to pick the lock, but they will pick.

You can easily generate a key for these locks by reading the wafers, or by very carefully impressing them.

*Lynn Chamber
Louisiana*



LAGARD COMBO GUARD WINNER: Nissan Electric Door Lock Code

If you have a customer that has lost their code to the keypad entry system on their Nissan, try this:

Look under the dash, just to the right of the glove compartment door. You should be able to see a plug-in computer module that has three (3) rows of numbers on it. The bottom row of numbers starts with a letter and is followed by seven digits. This is the master code for the system.

To reset a user code on the system, push "C" for clear and then enter the seven digits into the keypad. When you hear a beep begin, enter a four-digit code. This will be the user code for unlocking the doors. If you do not enter the user code before the beeping stops you need to start over by entering the master code.

After successfully entering the user code, try the code by locking the doors, pushing "C" to clear and then enter the four-digit user code. The power door lock buttons should pop up immediately.

*Larry Price
California*

TNL

The 2000 Chevy Venture

by Tony Vigil and Nelson Rivera

As consolidation continues to dominate the auto industry, we will see more instances of different models built on the same platform with only superficial differences among them. One of the more obvious examples of this trend can be seen in the Chrysler line, where the Plymouth Voyager and the Chrysler Town and Country both have different names, slightly different interiors, but are actually the exact same vehicle.

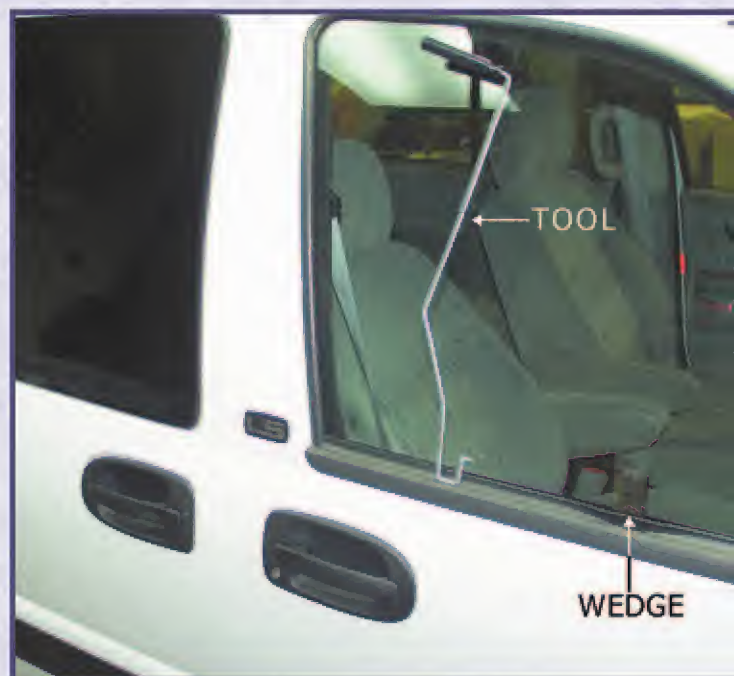
General Motors, with multiple divisions, including Chevrolet, GMC, Oldsmobile and Pontiac, has done this more often than any other auto manufacturer in the world. While GM features more models in its lineup than any other auto maker on earth, the actual number of automobile platforms is not much greater than any other major manufacturer, foreign or domestic.

A perfect example of the multiple uses can be seen in the GM mini-van platform. Where a single platform is utilized to start production on thousands of minivans, each GM division customizes their own version of the same frame. The Chevrolet Venture, Pontiac Transport, Oldsmobile Silhouette and Pontiac Montana may look like four separate and unique vehicles, but they are actually all built on the same GM minivan platform, making them essentially the same vehicle. The biggest difference among the four models can be found in the trim packages, which may include the material used for the interior dash, the seats and often, the front and rear.

A great marketing campaign has enabled the Montana (which is the same minivan, except with an upgraded appearance package) to emerge as one of the top selling minivans in the country. All four mentioned vehicles have the same front door lock system, and, as such, can be unlocked in the same way. This set of minivans can be difficult to open, but the good news is that once you learn to



Photograph 1.



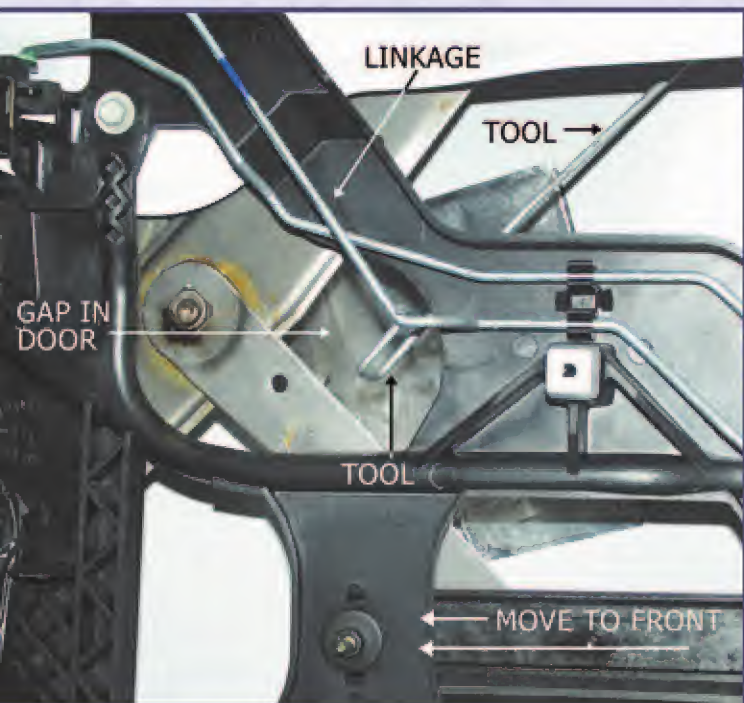
Photograph 2.

unlock one, you have learned to unlock them all. The photos for this demonstration are of the 2000 Chevrolet Venture (see *photograph 1*) but apply to all the GM minivans mentioned above.

Unlike many new GM vehicles, the lock linkage in the Venture is not shielded, at least not in the conventional way. The linkage is actually hidden and protected by the window

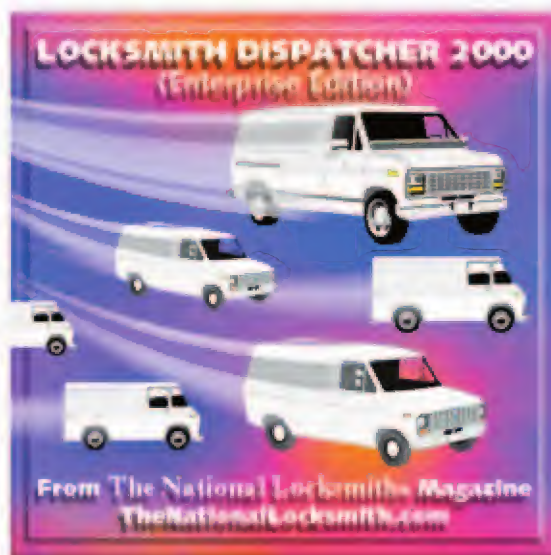


Photograph 3.



Photograph 4.

Locksmith Dispatcher 2000



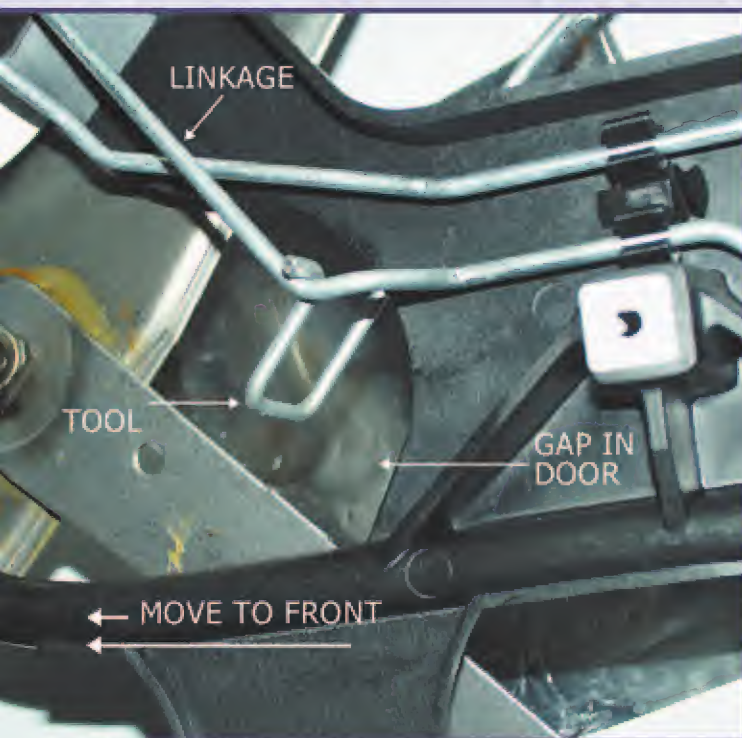
Controlled Service dispatching software
specifically for the locksmith!

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#DIS - 2000

mechanism, which works like a large pair of scissors. Because the window mechanism hinders access to the lock linkage, many locksmiths have difficulty unlocking these minivans, fumbling around inside the door cavity trying desperately to make contact with the linkage.



Photograph 5.

There is only a small space available for making contact with the linkage and if you miss that space, you could be in for a long day. As a result, an opening method must be used which makes finding and attacking the linkage simple and easy.

For this opening, we will be using the High Tech Tools number 67 tool. This tool is designed to unlock the Chevy Venture, and its sister vans with no fumbling in the door. The unique bend and tip of this tool help bypass the window mechanism with little effort.

Begin by creating space for your tool with a wedge in the passenger side front door. (See *photograph 2.*) Next, point the tip of the tool towards the front of the vehicle at the insertion point, and lower the tool into the door. (See *photograph 3.*)

Here is the technique which will save you a lot of time and trouble: Instead of lowering the tool into the door in the traditional vertical manner, tilt the tool to a 45 degree angle as seen in *photograph 4.* This angle actually provides direct access to the lock linkage.

Once you have made contact with the linkage, simply push down on the tool, without twisting, turning or pulling, to engage the linkage and unlock the door. (See *photograph 5.*) This photograph shows the tip of the tool accessing the lock rod.

With the proper information and tools, even the most challenging openings are possible.

For more information, contact High Tech Tools at: 1400 SW First Street, Miami, FL 33135. Phone: 1-800-323-8324; Web: www.hightechnetools.com. Circle 270 on Rapid Reply. **TNL**



TNL on CD

Our Compact Disc set features 11 years of the locksmith's favorite magazine. Thousands upon thousands of pages of indexed and searchable text!

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#TNL - CD1



1999 Sportster



by
**John
Blankenship**

1. (Top of page) Harley-Davidson motorcycles have a reputation and image that appeals to a lot of people. The Sportster 883 is an entry level Harley due to its lower price and weight. There are a lot of Sportsters on the road with the standard being the 1000cc model.

2. (Right) The ignition lock is the only lock on the motorcycle. It is located in front of the gas tank on the right side. It is very easy to make a key for this lock.



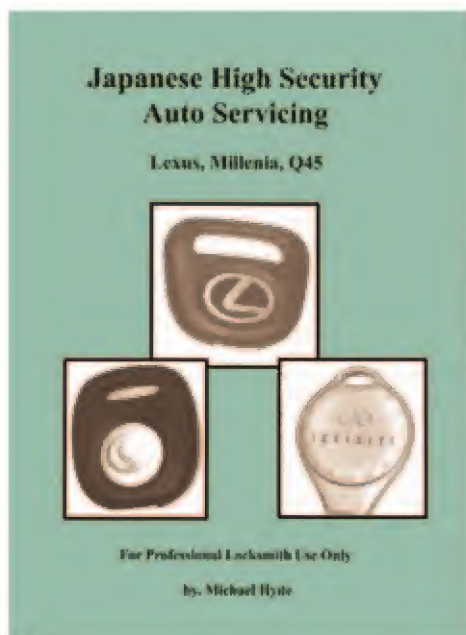


3.(Above) Insert a hook lock pick all the way to the back of the keyway with the hook pointing down. Then push the pick down until it stops and the retaining wafer will be pulled into the plug.

Now you can use a hook dental pick or similar tool to pull the plug out of the cylinder. The retainer is 15/16" from the face of the plug but you really don't have to measure because the back of the keyway stops the pick in the exact location needed to depress the retainer.

4. (Top Right) The plug has been pulled out the front of the cylinder. It contains 5 wafer tumblers and the wafer retainer. You don't have to worry about the tumblers spilling out because they are hard to remove.

5. (Right) An X234 blank inserted into the plug shows the cuts are 21211. There are only 2 depths used in these locks. A #1 depth is no cut and a #2 depth is a deep cut. This lock is very easy to read due to the big difference in the height of the wafers when viewed in the keyway. The first cut is always a #2 depth to insure that the key does not vibrate out of the lock while riding.



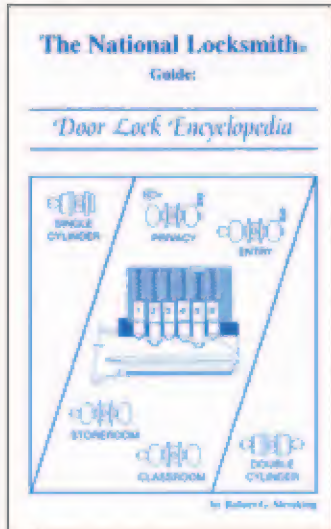
Japanese High Security

Some of the most profitable cars are also the trickiest to work on.

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#JAP - 1

Door Lock Encyclopedia



The ability to remove a lock from a door, disassemble the mechanism, and remove the lock cylinder for service is not always a simple straight-forward task.

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#DLE



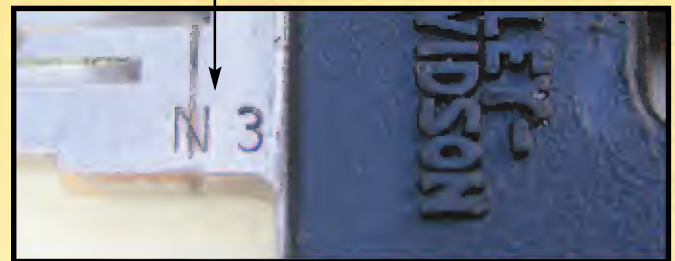
6. The tumblers from left to right are depths 21211 plus the retainer. A #1 tumbler is used for the retainer. These wafers look to be rather fragile so impressing should be done carefully. But actually, there is no need to impress it because the plug is so easily removed.

7. The original key is on the left. The key on the right was code cut with depths of 21211 and turns the lock smoothly.



8. N3 is stamped on the original key. I saw a new Sportster in the dealer's showroom with the key in the ignition. There was a tag on the key with N2 on it. The Harley-Davidson dealer confirmed that these are the code numbers.

The codes are reported to be A-Z but they have not been made available. The owner can order a key from the dealer using either the code or VIN number.

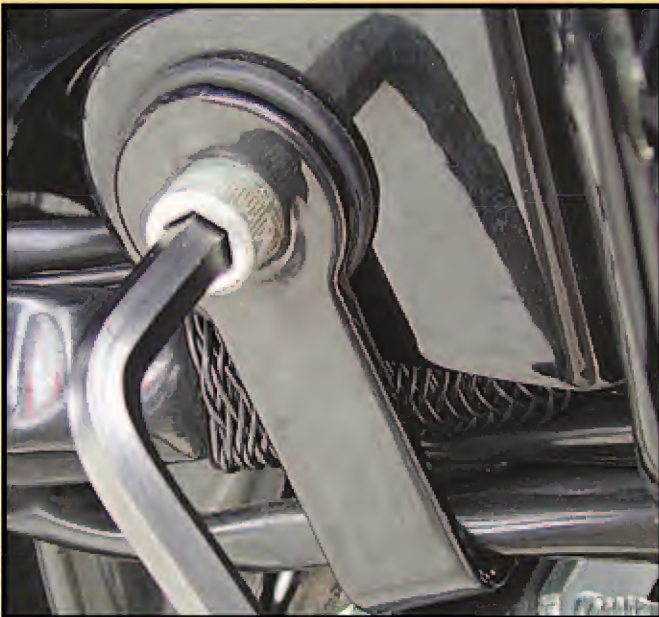


9. A view inside the cylinder shows the OFF and ACC. locking grooves. The key can be removed in either of these two positions. When inserting the plug back into the cylinder, you need to align the retaining wafer with the land between the two grooves. If you attempt to insert the plug with the retainer aligned with the groove, the back of the groove will stop the retainer before it is seated. It is not necessary to realign the tailpiece/switch; the plug just pops right into it.

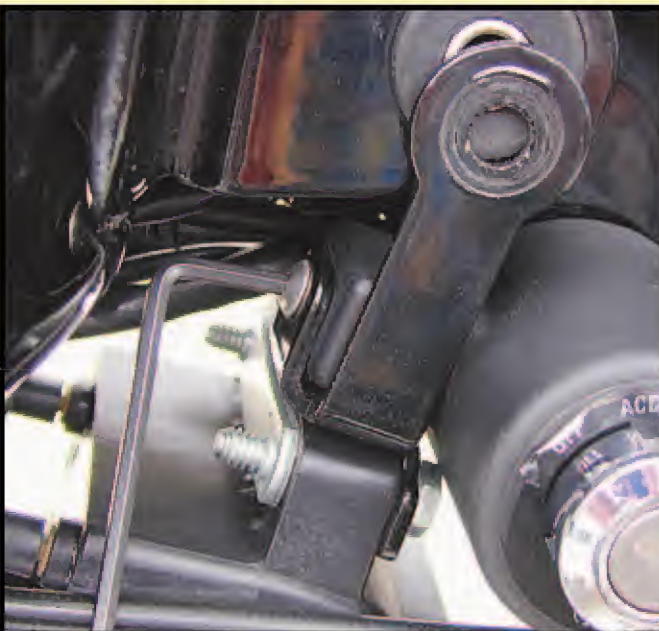




10. If you need to remove the ignition lock/switch, begin by removing the front gas tank mounting bolt with a 1/2" (13mm) socket. The bolt is located over the ignition lock.

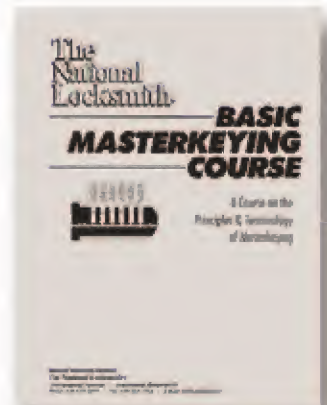


11. You will need to hold the head of the gas tank mounting bolt with a 1/4" hex wrench. It is located on the left side of the motorcycle.



12. With the gas tank mounting bolt removed you can lower the ignition lock a little until the coil hits the engine. You can also raise the gas tank a little and now you have plenty of room to work. Use a 3mm hex wrench to remove the lock mounting bolt.

Basic Masterkeying Course



13 Lesson
450 page course

The Basic Masterkeying course is designed for the locksmith who wishes to become proficient in Basic Masterkeying.

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#MK - 1

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13. Once the mounting bolt is removed the lock can be slid out. It will still be attached to the motorcycle by the electrical cable.



14. I removed the chrome bezel ring with channel locks. I used a folded shop rag between the jaws and ring to prevent scratching. Notice that the two throttle cables have been removed from the guide hook attached to the bottom of the lock housing. If you have removed the lock housing, remember to replace the two throttle cables in the guide hook attached to the bottom of it.



15. Once the bezel ring is removed, the plastic lock housing slides right off.



16. The switch on the rear of the lock is not designed to be taken apart so it is best to replace the whole lock/switch unit. The Harley-Davidson part number is 48415-99 and the price is \$12.97. There is no plug on the electrical cable so it is necessary to cut and splice the wires.



17. This photo shows the Sportster steering lock system. If the customer has lost the ignition key it is likely that they have lost the padlock key as well. That lock will be of the owners choosing and will probably be harder to make a key for than the ignition lock.

Codes: A-Z (not available)

Blank: Ilco X234 (HYD13), Silca HY11R

Spacing: 1=.215, 2=.309, 3=.403, 4=.497, 5=.591

Depths: 1=.300, 2=.240 **TNL**



BUSINESS BRIEFS

Unican for Sale

The Board of Directors of Unican Security Systems Ltd. wishes to announce that it has formed an Independent Committee of Directors to solicit and consider offers to purchase all the issued and outstanding shares in the capital stock of the company.

The Independent Committee is comprised of Messrs. Paul Lowenstein, Gerald Sutton and Larry Tapp. Mr. Lowenstein, Chairman of the Independent Committee, is the founder and Chief Executive Officer of Canadian Corporate Funding Ltd. Mr. Sutton is a successful Canadian businessman and long-standing Director of the Company. Mr. Tapp, a more recent addition to the Board, is Dean of the Ivey School of Business at Western University.

The Independent Committee was formed at the request of Aaron Fish, Chairman and Chief Executive Officer of the Company, and Massimo Bianchi, Executive Vice-President responsible for European Operations. Mr. Fish stated, "Creating and building Unican has been a tremendously exciting experience. Very few people have the opportunity to build a world leader in its field of activity. Unican is in that position today. However, as Shakespeare has written, "There is a tide in the affairs of men..."; to have the luxury of taking the tide at its flood is a great opportunity. I believe that, in the interests of the Company and its various stakeholders, as well as my personal interests, the time is right to seek a buyer".

In addition to Messrs. Fish and Bianchi, two other major shareholders, Messrs. David Stendel and Morty Fruchter, have supported the

creation of the independent Committee. With respect to Messrs. Stendel and Fruchter, Mr. Fish commented, "David and Morty, in addition to being close personal friends, are founding shareholders of Unican. It is rare for a man to have had such good friends and loyal partners".

Unican Security Systems Ltd., with sales in fiscal 2000 surpassing Cdn. \$475 million, is a leading global supplier of access control products for both the hospitality and commercial sectors, as well as mechanical and electronic security products for the safe and vault industry. Unican is also the world's leading supplier of key blanks, key cutting equipment, and mechanical pushbutton locks. Also under the Unican umbrella of product offerings is the Locksmith Publishing Corp. Publishers of The Locksmith Ledger and Security Technology & Design.

ASSA ABLOY Acquisition of Yale Intruder Security

ASSA ABLOY AB entered into an agreement with Williams PLC to acquire Yale Intruder Security. The

acquisition closed on March 24 and will be consolidated from September 1. The closing of the previously announced divestiture of the Chubb safes business to Gunnebo AB will take place before the end of August.

Following discussions with regulatory officials, ASSA ABLOY has deferred its acquisition of the Spanish company, Tesa SA, and its subsidiaries within the Tesa Group, with sales of approx. 700M. A minor portion of Tesa SA's sales consists of components for the Tesa Entry Systems Inc., a company not included in the acquisition. Tesa Entry Systems Inc. manufactures electronic hotel locking systems in competition with ASSA ABLOY's subsidiary, Vingcard. ASSA ABLOY and Williams PLC are pursuing steps in order to permit ASSA ABLOY to acquire Tesa SA promptly.

As part of the consideration Williams PLC received 19.8 million shares in ASSA ABLOY AB at closing. Williams PLC has agreed not to sell more than 50% of these shares within 12 months after closing.

The acquisition enhances ASSA ABLOY's continued

strong sales and profit growth. The Yale Intruder Security acquisition adds 45% to total sales and will be cash flow positive from the start. Following the divestiture of the Chubb safes business referenced earlier, ASSA ABLOY expects the division this year to reach sales of approximately SEK5 600 million with an EBIT margin over 15%. The acquisition including the new issue is expected to be EPS neutral for this year and 2001. There is an estimated margin improvement potential of 2-3% within 3-4 years.

The two groups have complementary strengths and there is little geographical overlap. There are considerable organic growth opportunities available through cross selling within the new group. In emerging markets there is an increasing demand for better locks and higher security. ASSA ABLOY has a strong presence through its sales companies in Eastern Europe and South East Asia, while the Yale Intruder Security division has a strong presence in Mainland China, South Africa and South America. In electro-mechanical products ASSA ABLOY will benefit from shared R&D activities and the accelerated introduction of more innovative products.

CCL Appoints National Sales Manager

Brad Aylett has been appointed National Sales Manager of CCL Products. Aylett has over a decade of experience in seminar training, customer service, marketing, and has trained well over 1,500 security industry personnel. 



KEY CODES

BMW Series

BMW BH010009-BH241009, Part 3

Manufacturer: BMW

Code Series: BH010009 - BH241009

Key Blanks:

Boerkey: 1458PS

CEA: BM2P

Errebi: HF48P8

Fuki: MT-4

Ilco: S7BW-P

Ilco EZ: S7BW-P

JMA: BM5P

Kraga: AP196

Lotus: HF155S

Orion: S7BWP

RR: XPHF116

R Clover: C-5

Silca: HU58AP

Number of Cuts: 12, six on either side.

M.A.C.S.: 2

Key Gauged: Shoulder

Center of First Cut: *Side A:* .183 *Side B:* .228

Cut to Cut Spacings: .128

Cut Depth Increments: .024

Notes: Requires a side cutting
milling machine to produce key.

Spacings:

A Side

1 - .183

2 - .311

3 - .439

4 - .567

5 - .695

6 - .823

Depths:

1 = .276

2 = .252

3 = .228

4 = .205

HPC 1200CMB

Code Card: N/A

Jaw: N/A

Cutter: N/A

Gauge From:

B Side

.228

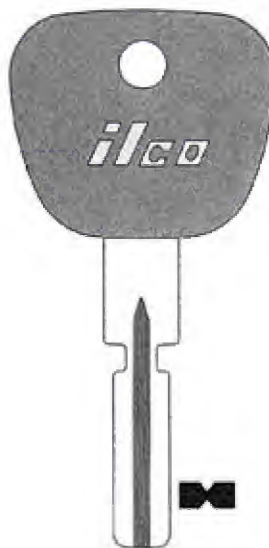
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Punch: N/A

Jaw: N/A

Silca UnoCode

Card Number: N/A

HPC CodeMax

DSD #: N/A

Jaw: N/A

Cutter: N/A

Curtis No. 15 Code Cutter:

Cam-Set: N/A

Carriage: N/A

Framon #2:

Cuts Start at: N/A

Spacing: N/A

Block #: N/A

Depth Increments: N/A

Cutter: N/A

Key Clamping Info: N/A

A-1 Pack-A-Punch

Quick Change Kit: N/A

Punch: N/A

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ITL 9000 & 950

Manufacturer ID: N/A

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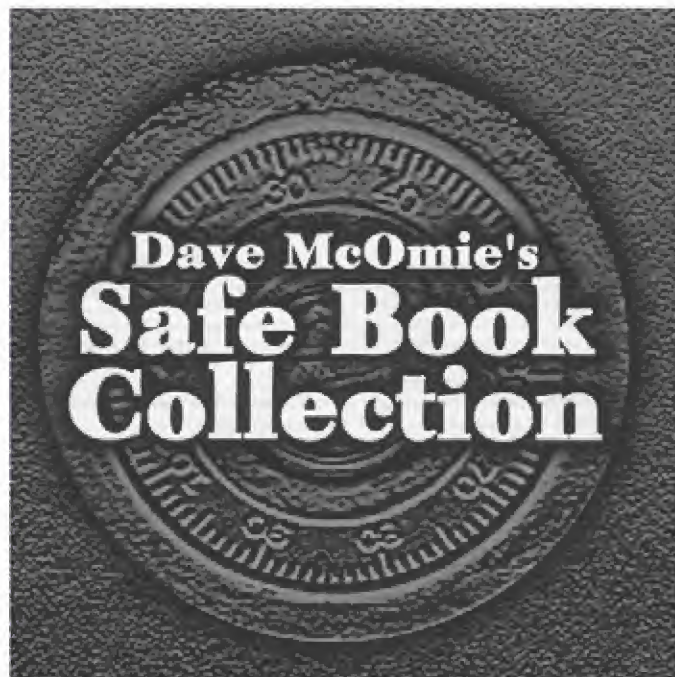
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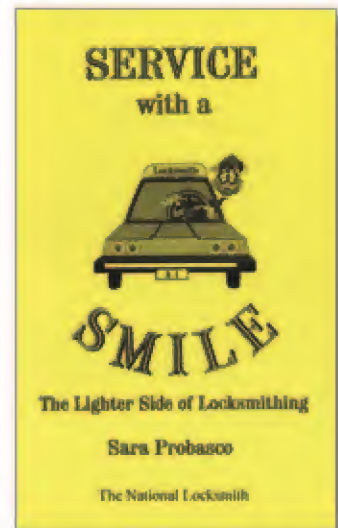
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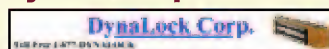
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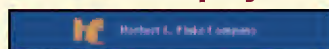
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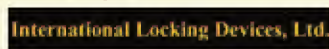
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WEB REVIEW

National Auto Lock Service, Inc.

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National Auto Lock Service, Inc. ...the car guys!

This company calls themselves "The car guys," and they prove it on their web site. You can look up almost any car for free online and see which keys it uses, whether it has a transponder, and which equipment is needed for programming.

Among the many other things you can do is download the Determinator application chart, view a tremendous variety of keys and parts for cars, and even watch a video with NGS programming instructions for Ford.

Also you can click a link to tour AutoSmart Advisor software. You can also access that site by going to AutoSmartAdvisor.com. There, you can take a rapid online tour of this software which arms you with every known bit of data on virtually every car on the road, about 5,000 vehicles.

In fact, the software even allows you to quote pricing on jobs instantly because of its ability to apply your own hourly labor rate to any vehicle job. Thus, the program customizes itself as your own unique flat rate software.



Meilink



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Monaco Lock



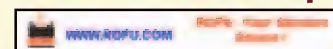
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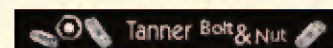
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**Taking
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TEST DRIVE!

If you do much automotive work, you know that there are few things more frustrating than disassembling a door or trunk lock to rekey and upon reassemble find that you do not have the proper face cap to complete the job. All automotive technicians have encountered this situation at some inopportune time. Often more than once! Until fairly recently, there has not been a single functional tool that would cleanly remove and then replace an automotive lock face cap. For years there have been tools that would crimp a new face cap on and even tools that would remove a face cap. But there has not been a tool that would do both remarkably well... until now. The Gator Tool by Steve's Locksmithing is a multi-purpose face cap tool designed to both remove and then replace the existing face cap with relative ease. It can also stake or restake loose sidebar covers on GM ignitions. It is actually a 3-in-1 tool.

DESIGN CONSTRUCTION:

At first sight the tool resembles a modified pair of pliers. In essence it is, however, you would be fooling yourself if you thought that's all it is.

Each Gator Tool is precision machine milled from solid steel. It is not cast. The cap removal tip is machine milled as well and then Rockwell hardened for durability and long life. The tip is also replaceable should one break or chip, which would only occur if the tool was dropped or abused. The cap replacing crimping unit is adjustable to accommodate small or large face caps and can restake round as well as square caps. It is also adjustable for various thicknesses of caps. The sidebar staking tip is machined into the side of the tool.

Gator Tool

by Steve's
Locksmithing

TOOL USE:

Originally, face caps were removed with either a small screwdriver or other tool, physically prying the edge of the cap back. This method usually left tears and rips in the metal rendering the cap unusable. It would remove the face cap, however, replacement was out of the question.

The Gator Tool consists of a two step process; one lifts the face cap edge just enough so there is enough relief on the cap so it can be removed with a minimal amount of effort and damage. The metal on the cap does not tear or rip. What was once a throw-away item is now a reusable item. The only time there will be a need for an after market face cap will be when the lock had been damaged and the removal and reuse of the original face cap is not an option.

Face cap removal is achieved by a process of repeated small bites with the tip of the Gator Tool around the cap. Replacement is accomplished by adjusting the crimping unit and squeezing the Gator Tool to fasten the cap back on. When this procedure is performed carefully and properly, with the lock reinstalled on the vehicle, no evidence of face cap removal and replacement is detectable.

The sidebar cover staking portion of the tool is a simply process of inserting the lock in the tool and

squeezing the tool to secure the cover.

PRICE:

The price of the Gator tool is \$149.95. That may seem expensive, but just add up the price of a couple of manufactures face cap kits and the fact that this tool will do *all* face cap's, and the economics are easy to understand.

CONCLUSION:

Once you are accustomed to the operation and feel of the Gator Tool, the process is fast and easy. You will soon wonder how you ever survived without it.

For more information on the Gator Tool, contact any of the following distributors:

*Tech-Train Productions Inc.
(Florida): Phone: 800-356-0136; Fax:
(850) 476-7410; E-mail:
techtrain@techtrainproductions.com;
Web: www.techtrainproductions.com*

*Sieveking Products Co. (Illinois):
Phone: (815) 874-4030; Fax: (815)
874-5713; E-mail:
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Web: www.sievekingprodco.com*

*Lockmasters Inc. (Kentucky):
Phone: 800-654-0637; Fax: (606) 885-
6041; E-mail:
salesinfo@lockmasters.com; Web:
www.lockmasters.com*

Or circle 269 on Rapid Reply.

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IN SUMMARY:

DESCRIPTION: The Gator tool is a multi-purpose automotive face cap removal replacement tool.

PRICE: \$149.95

COMMENTS: The first tool designed to remove and replace all face caps that's easy to use and really works.

TEST DRIVE RESULTS: Once you have one, you will wonder how you ever did without it.